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*The Catacombs of Rome and Christian Art.**

THE appearance of another big book devoted to the description and history of the Catacombs of Rome is more or less an invitation to take a survey of what has already appeared on this most interesting subject. Indeed, if one were to devote any considerable space to reviewing such a work, without showing how it is but one link in a long chain, the importance of this single link would be unduly brought forward, and the readers of these remarks would be misled into a belief that the treatise in question was a singular and special work, reflecting in its solitariness considerable *eclat* upon its compiler. Without in any way detracting from such merits as may be differently discoverable by those who study M. Roller's "Catacombes de Rome," it may be advisable to slightly touch upon some of the more important of the works which have been written about the Catacombs. In the first place, the sort of mystic sanctity popularly admitted to hang over these interesting underground cemeteries no doubt operates upon most people in such a manner that they may allow their interest to become developed in a prejudiced manner. The birth of Christianity at Rome, as a codified system with an organised body of teachers such as St. Clement would seem to indicate existed at the beginning of the first century, is somehow inevitably connected with the Catacombs. How the Christians were persecuted and sought the shelter of the Catacombs, and in the larger spaces in them conducted their services with pure and pristine simplicity, are ideas which seem to press in upon the imagination without any precise reason, but, as one might say, quite naturally. History of the Catacombs, commenced with such preconceptions only, is, no doubt, immensely interesting, as it developes and enriches the possibly slight and shadowy base upon which it rests in the same ratio as it may seem to become unhallowed and disturbed if attempts be made to work out historical facts and probabilities into the apparently dark recesses of the still earlier past from the ascertained date of events and monuments connected with the Catacombs.

Broadly speaking, the bibliography of the Catacombs may divide itself into two sections, —one in which Christian history is the predetermined end of all discussion upon the subject, and the other in which history, unqualified by sectarian thought, may be worked as far backward as possible. The bulk of the works already published come under the heading of the first-named section. The sixteenth and seventeenth century antiquaries, Bosio and Bottari, were apparently stimulated to their respective tasks as much by sectarian zeal as by the spirit of antiquarian inquiry. The learned De Rossi, 200 years later, is the generally-accepted authority upon matters concerning the history of the Catacombs, the art displayed in them, and the meaning of the symbolism which animates the art. Others, such as Lord Lindsay, Mr. St. John Tyrwhitt, the Rev. Dr. Northcote, and Mr. Brownlow have each added observations and speculations concerning the subject. In a freer manner, an American savant, the Rev. J. P. Lundy, has treated the "Art and Symbolism of the Primitive Church as witnesses and teachers of the One Catholic Faith and Practice." His labours have (strange to say, perhaps) been mainly directed to collecting types of similar symbols which abound in Oriental countries, and belong to periods and religions long antecedent to Christianity or its symbolism, and of comparing them with their Christian imitations, thereby educing the opinion that Christianity as a new religious system is indebted in its ritual to many existent forms and ceremonials of non-Christian faiths. From the historic side of the question such a contribution to the bibliography of Christian art and the Catacombs is most valuable, and should encourage the birth of new considerations and reflections upon the whole subject. It is true that the Rev. Dr. Northcote and Mr. Brownlow in their two volumes, — professedly condensations of De Rossi's work,—devote a chapter to the relation between Pagan and Christian art. Following very much in these lines, M. Roller has done the same. Yorrick had a good practice of rating the merits of his sermons by little notes on the outside of them. And it sometimes seems desirable that other writers in expounding their notions should fall into a similar method of gauging their performances. For instance, in M. Roller's book, what a boon it would be to his readers had he annotated his various chapters. He might have inserted in the margin neat little headings, — "Historical," "My Own Reflections," "Rhetorical Embellishment," and so forth. As it is, one frequently comes across ideas which must probably have occurred to most people, dressed out in a finery of magniloquence or presented in a sort of free-and-easy conversationalism, neither of a character encouraging to readers to pursue the task of going through the two volumes.

M. Roller explains in his Introduction the object of his labours, which have only been undertaken after many years' residence in Rome and constant visits to the Catacombs and the various remains of Christian art collected in the Lateran Museum and the Vatican. The aim of his exposition is principally the same as that of other Catholic antiquaries, and we have not discovered any marked novelty in them. They seem to be accompaniments of photo-lithographic illustrations taken in some instances from the various paintings, inscriptions, and sculptures direct. The illustrations thus are of first importance, and the erudition second. M. Roller owns almost that little, if anything, is to be added to De Rossi's work, and accordingly makes free use of the learned Italian's text, as well as many of his plates. The abridgment of De Rossi, compiled by the Rev. Dr. Northcote and the Rev. Mr. Brownlow, is plentifully illustrated with woodcuts and chromo-lithographs, and the arrangement of the text is well adapted to attract readers. Their work is published, like M. Roller's, in two volumes; but theirs are of octavo size, and not so formidable as M. Roller's big quarto tomes. The first part of Dr. Northcote's and Mr. Brownlow's "Roma Sotterranea" is devoted to History, and the second to "Christian Art." M. Roller's consists of a series of 100 chapters and 100 plates, with Introduction and *Résumé*, but, unfortunately, no index.

M. Roller, commencing with the plan of a cemetery, discusses the difficulty of making one, and accordingly gives a plate of the plan of the Catacombs and *arenaria* adjoining the western side of the Appian Way,—that is, a plan of the Catacombs, or cemetery of Callixtus. Chapter II. explains the stratification and system of the "tufa" or mould into which the catacombs were cut. Tombs, galleries, and caves are next dealt with in detail. Some of these are illustrated by woodcuts, some by photo-lithographs or "heliogravures." In Chapters IV. and V. the caves or cubicula are discussed. The catacomb-makers, or *fossores*, with illustrations of paintings of such labourers found in the Catacombs, form the matter of Chapter VI. At Chapter VII. we are introduced to instruments of martyrdom. To these succeed vases, lachrymatories, and such like, exhumed from the tombs, in the course of describing which M. Roller enters upon the consideration of the antiquity of signs of the cross, not mentioning, however, the use of such marks amongst pre-Christian peoples and sects. These, however, form the subject matter of Chapter LXXXVIII.

In succeeding plates a fairly representative collection of the early rude little tablets, with

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* Les Catacombes de Rome: Histoire de l'Art et de, Croyances Religieuses pendant les premiers Siècles du Christianisme. Par Theophile Roller. Paris: Vve. A. Morel & Cie., Libraires-Editeurs, 15, Rue Bonaparte. 1881.

Roma Sotterranea; or, an Account of the Roman Catacombs, especially of the Cemetery of St. Callixtus, compiled from the works of Commendatore de Rossi, with the consent of the author. New edition. Rewritten and greatly enlarged by the Rev. J. Spencer Northcote, D.D., Canon of Birmingham, and the Rev. W. R. Brownlow, M.A., Canon of Plymouth. London: Longmans, Green, & Co. 1879.

inscriptions and incised symbols and cyphers, is given. Most of the originals are now let into the walls of the staircases in the Lateran Museum. Emblems—like the pair of scales, a leaf, a dove, a wine-barrel, a lion, a pair of pincers, a pickaxe, an anchor, a fish, wreaths, a dolphin—are to be seen on those presumably most ancient. Of apparently later time are those like the figure of a little man in a box, which is understood to mean Noah and the Ark, or like a man stretching his hand towards a swathed figure upright under a canopy, which signifies the raising of Lazarus. The ram and peacock also appear, and the shepherd bearing a sheep across his shoulders. This last is frequently sculptured upon sarcophagi which date from the fourth century. It is the figure of the Good Shepherd, but is, in idea and design, very similar to the pre-Christian figures of the Hermes-Kriophoros, an engraving of which is given in Dr. Northcote's book, from the original preserved at Wilton House. Dr. Northcote's lengthy argument to dissociate the Hermes-Kriophoros from the Good Shepherd fails in effect when the representations of this subject are brought side by side. But the more successful of M. Roller's plates are those of the sculptured sarcophagi. These valuable works of art,—valuable archæologically rather than as displaying a high standard of composition, drawing, or, indeed, of stone and marble cutting,—were some time ago taken from the Catacombs and placed in the long gallery of the Lateran Museum. In these it is interesting to note the recurrence of the subjects of the Old Testament, like the Fall, Moses striking the Rock for Water, Jonah and the Whale, and, of the New Testament, many of the miracles of Christ. As Dr. Northcote truly says, this collection of Christian sarcophagi, i.e., sarcophagi of the Christian era, is the finest in the world, and, *en passant*, one cannot resist expressing the hope that a few casts of some of the richer specimens,—the tomb of Junius Bassius, for instance,—may sooner or later find their way to some public collection in this country.

Some few of M. Roller's plates giving examples of the arabesque and figure tempera paintings, have been done by aid of the magnesium light from the originals; others are merely copies from engravings which have appeared in De Rossi's work. In some respects, the chromolithographs of the wall paintings in Dr. Northcote's work are more real and satisfactory than those of M. Roller's. From paintings and sculptures M. Roller returns to inscriptions presumed to have been made by Pope Damasus; and then he takes us through a course of "dogmatic" inscriptions in which profession of Christian faith is clearly stated: as, for instance, "Young Urbica, sweet spouse, who reposes in peace in the name of Christ." These have been thought to be not earlier than the fourth century. The varied objects, such as gold ornaments glazed in circular forms or medallions, lamps, &c., to be seen in the Vatican are also illustrated. From this cursory glance over M. Roller's work, it will be apparent that an arbitrary, if not empirical, arrangement of subject has been adopted, the object of which is not quite clear. To some extent the arrangement may be considered chronological. The various aspects of the different objects are, however, interwoven; and little if anything is said upon the technicalities concerning the divisions of handicraft which the entire collection comprises. M. Roller's *résumé*, which fills some twenty pages, is perhaps the principal novelty to which he can lay claim. Throughout his work, the religious view of the subject and history supervenes. And one regrets this all the more since it has already been skilfully handled by de Rossi and Dr. Northcote and Mr. Brownlow. Persons who have not thought much of such matters will, no doubt, be interested to learn that incidents like the Nativity, with the ox and the ass grouping themselves around the cradle, do not appear pictorially in Christian art until the fourth century. The legend which gives rise to this picturesque idea is said to have first appeared in a written form in the "Évangile de l'Enfance," by Matthias,—a religious writer who collected and wrote out many similar legends in the fifth century. The learned Christian antiquaries have remarked upon the inappropriateness of setting forth the humble origin of the Saviour of the World until such time as public opinion had sealed what is called the triumph of Christianity,—namely, in the fourth century.

Turning now to Dr. Northcote's book, we may learn that the recorded history of the Catacombs has been gathered from old martyrologies and itineraries. The preservation of many of these ancient records is due, says Dr. Northcote, to "the exceeding care of the primitive Church in collecting and preserving a faithful record of the last words and deeds of her martyrs." The earliest quoted are those presumed to have been made in consequence of St. Clement's division "of the seven regions of Rome among faithful notaries of the Church, who should each in his own region with diligent care and zeal search out the acts of the martyrs." This act of St. Clement is assigned to the first century,—a period, in fact, when according to other historians of the social condition of Rome, the Church, as we now regard it, was virtually unknown. Its organisation was *in limine*, according to such. St. Fabian, Pope in the middle of the third century, is said traditionally to have imitated St. Clement's example in perpetuating a well-organised system of registering the events connected with the early martyrs. These statements, then, about St. Clement and St. Fabian almost lead one to feel that historic evidence of this character hangs in an unbroken chain from the first to the third century. Unfortunately, however, just as one is coming to so satisfactory a conclusion, Dr. Northcote disperses our satisfaction by saying that these records of St. Clement and St. Fabian perished during the persecutions of Diocletian. Then he raises our hopes once more by telling us that some of the records surely escaped destruction, since Eusebius is credited with having edited a collection of them. Alas! Eusebius's edition of the Roman martyrdoms is not now discoverable. However, St. Jerome may come to our aid, for he is reputed to have made a translation of Eusebius's collection. But again, St. Jerome appears to be of no use, for his work has seemingly perished. The "Martyrology," which goes by his name, published by Fiorentini, at Lucca, in 1688, "which is the most ancient that is extant, was compiled, and not very carefully, from the calendars of various churches, and contains, therefore, some repetitions, inconsistencies, and contradictions." "One compiler of this Martyrology must have lived in the time of Melchiades, who was Pope A.D. 311-314, and another in the time of Boniface I., A.D. 418-422." It will be seen then that, at least for the first three centuries A.D., there are no contemporaneous writings concerning the martyrs and their use of the Catacombs. Tradition may possibly have been more precise in those times than in the present. But this is open to doubt. And this being so, it is permissible to question the grave precision with which the exact burial-places of possibly suppositious martyrs are nowadays indicated. About 336 to 354 A.D. it is supposed that the "Christian Almanac" was compiled, to which, in 354 A.D., Dionysius Filocalus added some "highly ornamental illustrations." Next, come inscriptions on stones set up by order of Pope Damasus on many of the supposed martyrs' tombs, and some few of which are now to be seen in the Catacombs. Goths, Lombards, and other sacrilegious barbarians destroyed many of them. The more numerous of the inscriptions now to be seen are said to have been produced in imitation of the originals, by "learned ecclesiastics or pious pilgrims of the ninth or tenth centuries." The "Liber Pontificalis" is a ninth-century compilation, by Anastasius, from more ancient documents. The statements in the "Liber Pontificalis" are often at variance with those of the Almanac of Filocalus. Similar want of agreement is found in respect of the Martyrologies of Bede (eighth century), of Ado (A.D. 875), archbishop of Vienna, and Usard, a Benedictine Monk of Paris, in the days of Charlemagne. This last-named work, it is to be observed, is the foundation of the Roman Martyrology now in use. During the Pontificate of Pope Urban, in the middle of the third century, the martyrdom of St. Cecilia is reputed to have taken place, but the acts of her martyrdom,—so picturesquely described by Chaucer in his "Second Nonne's Tale,"—cannot lay claim to any higher antiquity than the fifth century. The place shown as the crypt of St. Cecilia is believed to have been a square cave, but some century or so after the presumed martyrdom was perpetrated, Pope Damasus embellished it. To his work in still later times succeeded the construction and ornamentation of the shrine by Sixtus III., and so, perhaps, the glorification of the Saint may evolve as time asserts itself, and makes more remote, the persecution of some Christian woman who died by the hands of authorities enraged by her persistent asseveration of the truth of her faith. The veracity and authenticity of the martyrologies must be full of interest to those who require to establish them beyond the region of question, but, as we have before remarked, they cannot be seriously taken as lights upon the darkness of the first three centuries' history of the Catacombs and Christian art.

The next class of ancient documents upon which writers of the history of the Catacombs have chosen to rely are the itineraries of pilgrims. These, Dr. Northcote considers, are more useful. The itineraries, like the martyrologies, do not date, however, from before the middle of the fifth century; indeed, if so early. William of Malmesbury's account of the visit of the Crusaders to Rome, A.D. 1095, contains extracts presumed to be from itineraries of the seventh century. There are similar records of later date, in which traditions concerning the saints and their relics are perpetuated, enlarged, or diminished, according to the inclination of the various compilers. In the tenth century the Catacombs had almost passed out of mind. The site of them was nearly forgotten. From that time until the fifteenth century it appears that they passed from recollection. Franciscan friars visited the Catacombs in 1432 and 1482, and left inscriptions of their visits. In 157[illegible] spirit of inquiry concerning these early burying-places sprang into liveliness, and instigated Alfonso Ciacconio, and two Flemings, Philip de Winghe and Joannes Macarius, to commence investigations; their writings, however, were not brought before the public in any complete or printed form. In 1593 Bossio, whose MS. work is preserved in the Bibliotheca Vallicellina at Rome, took up the investigations of his immediate predecessors. And forty years later the first edition of Bossio's "Roma Sotterranea" was published. It is not within our present means to continue this rough reference to the various steps by which the history of the Catacombs and Christian art has become developed. We have probably borrowed sufficient indication of its progress from Dr. Northcote's work to show that there is still a wide field for others to wander over in framing accounts of such matters, and to fit them into the general history of art, which, for our own part, has the greatest interest for us.

A modern phase, tending to the popular exaltation of poets and their heroes, as in the case of Dante, Shakspeare, Browning, and Ruskin Societies, finds, if we may not be considered too secular to say so, a parallel in the creation by the Romish church of its calendar of saints and martyrs, and other similar heroic personages. Dante's Beatrice was certainly, in her prosaic reality, an actual personage. Idealised by the great poet, she becomes transcendental. In the same manner it appears that the early Christian martyrs have a real and ideal being. The ideal being is that, however, which the Romish Church has preferred to select for association with the earlier history of the Catacombs. It is no part of the present observations to enter into the merit of such association. We make mention of it merely to invite the attention of our readers to the consideration that such legends of the Church seem to have no intrinsic value in an antiquarian and historic inquiry into the origin and use of the catacombs.

Those who seriously desire to obtain an impression of the condition of Rome during the first three centuries A.D., cannot do better than consult Gibbon's "Decline," and, with the information obtained therefrom, to understand practice in respect of burials and disposal of the dead, they may usefully mingle Dr. Northcote's observations upon early Roman tombs. The deduction, or perhaps we may go so far as to say the natural issue of reflections, from such information is, that the Catacombs in their beginning had little, if anything, to do with the first Christians at Rome. Rome, at that time, was infused with various religions. Egyptian Serapis, Persian Mithras, lesser deities, *lares et penates*, inherited by Romans from Greeks, together with Jewish tenets, Gnostic doctrines, and much else, were all in a way tolerated and in various directions influenced Roman society in its habits. Cremation, as a means of disposing of dead bodies, was used, and burial was also in fashion, restricted perhaps to the richer and select few rather than in general use by the many. Fine tombs were erected, as along the Appian Way, and relatives and friends came thither to do honour to the defunct by holding feasts at their tombs,—an early Roman form of

Christian *agapæ*, and of later acts of devotion done in Middle Ages and onwards at the shrines of martyrs. Crushed and kept in servile abjection as the dependents of Roman magnates might be, the spirit of consideration and kindliness from time to time had opportunities for shining under the benignity of rulers like the Antonines. The wealthy, from fostering the practice of entombment and burial for themselves, gradually helped in extending it in respect of their followers and servants, and signs of wider benevolence in this particular direction are manifested in facts like that of Babius Gemellus, who purchased a large tract of land for the burial of a hundred of his poorer fellow-citizens.

Burial-clubs, as is well known, arose in Rome in the first century, and on this subject Dr. Northcote's Chapter II. of Part I. is extremely interesting. "The number and constitution of these Roman burial-clubs is a subject to which the attention of scholars has only recently been drawn. It was first broached by Mommsen; but nobody before De Rossi had pointed out their bearing upon the fortunes of the infant Church." Burial thus gradually superseding cremation, the question of sufficiency of space for the disposal of bodies and the making of cemeteries asserted itself, and evidently obtained the required attention. It is, perhaps, probable that imported Egyptian influences at Rome may have aided the development of cemeteries and burying-places, since the well-known reverence of the Egyptians for the dead, to say nothing of the crafty speculations of Egyptian priestly undertakers, or *choachytes*, had long before supplied Egypt with considerable *campi santi* and subterranean galleries for burial.

About Rome in the first century A.D., and before, the digging-out of sand for building and other purposes had caused the formation of systems of subterranean passages, called *arenaria*. Now it is a particular point with many historians of the Catacombs to set their faces against the supposition that these *arenaria* can have been connected with the making of the Catacombs. It is, however, known that in some cases the *arenaria* have been converted into places of sepulchre. The Catacombs, as distinct from *arenaria*, are similar passages cut in compact mould or earth called *tufo*, and this sort of material is evidently better adapted for underground excavations than sand rocks. In many instances old sand *arenaria* are found not only in close proximity to, but actually forming part of and interlacing themselves into, the earth-cut Catacombs. A few considerations like these seem to furnish fair grounds for conjecture that, as burial of the dead became popularised, the disposal of the corpses in disused *arenaria* at first, and then, as convenience dictated, in similar passages cut into the earth contiguous to the *arenaria*, became a recognised method of burial with Roman citizens generally. In spite of intolerance, the Christian sect, with its special tenets as to burial, arose, and the peculiar advantages of subterranean passages, not only for burials, but also for unmolested and secret accomplishment of Christian devotions, may have recommended themselves to the devotee. And in regard to circumstances favouring the growth of Christian doctrines, we may note here a few remarks of Gibbon to the effect:—"I. That a considerable time elapsed before the emperors considered the new sectaries as an object deserving of the attention of government. II. That in the conviction of any of their subjects who were accused of so very singular a crime, they proceeded with caution and reluctance. III. That they were moderate in the use of punishments; and IV. That the afflicted church enjoyed many intervals of peace and tranquillity." The poverty of the earliest underground tombs,—inscriptions and such like,—all point to a use of the Catacombs by persons either of a poor class, or without desire to introduce into these underground places any of the decorative sculptures and paintings which abounded overhead. It is not until the fourth century, when Christianity was supplanting Roman Paganisms, and became formally recognised by the ruling powers, that art of pretence in painting and sculpture virtually found its way into the Catacombs. The relics of the art of the first three centuries are not of a high standard of merit. Speaking generally, it seems to belong to a poorish class of persons. In the fourth century, however, the best phase of Roman art was all but extinct, and the Roman Christians attempted, with their antecedents of poor art, to practise more ambitious art. All that they could do at best was an art imitative of that in which they then lived. The art which, from religious and other causes, they had previously and avowedly despised, was now almost dead.

Hence, whatever likeness is possibly seen between Christian wall-paintings and those of Pompeii, Herculaneum, or the Palace of the Cæsars, there is no question of their being, *quâ* technique and grace, far inferior in quality to that of Roman art in the first century. The Christians, in truth, had lost a period of close upon 300 years, during which, had they been possessed of real ecclesiastical organisation and property, they might have come to the succour of the expiring pagan art. They might have infused into pagan art purity of thought, and who can say whether this might not have given new impulse to what had degenerated through luxurious use, and was dying through a phlegmatic temperament consequent upon luxury?

A different reason, and one propounded at some length by Mr. Lundy, for the absence of any marked demonstration in the first century of Christian symbols, paintings, and sculptures in the Catacombs, as well, too, for the selection of the underground passages for the first performances of their simple rites, and the holding of fraternal meetings, is said to lie in the "Discipline of the Secret" (*disciplina arcani*) of their faith. This discipline, Mr. Lundy seems to show, is a direct imitation of the *disciplina arcani* to be found in connexion with the mysteries of Mithras, Samothrace, and Eleusis. Apart altogether from the doctrinal direction of any such mysteries or secrets, it is to be observed that the necessity for the existence of such mysteries and secrets appears to have been felt by propounders of almost all faiths. This is much like what occurs now. With this difference, however, that the basis of any special branch of knowledge or code of rules which are believed to be likely to be of use to mankind, is at the present time set forth as simply as possible for general acceptation. Nowadays, propounders of knowledge, thanks to the almost universal sense of freedom, strive, as a rule, to place their propositions or doctrines in a clear and readily-understood shape, inviting expansion of them by any one. In earlier times, freedom was feared, and hence the necessity for mystery and secrecy. Exclusiveness in possession of doctrines acted as an attraction to those outside the circle of exclusive possessors; and, as in the case of Christianity, it was not until this attraction had operated upon a sufficiently large *clientèle* that the mystery and secrecy gradually diminished. On the other hand, jealous of power which the assumed possession of mystery and secrecy seemed to confer upon them, the teachers of Christianity, the early presbyters and bishops, together with their chief, the Pope, maintained and exercised their right as the direct inheritors of inner tenets of the Faith, which, as people became conversant with the doctrines of Christianity, were revealed by these teachers. It is not altogether uninteresting to note that the system of monopolising secrecy found a revival to some extent in the recent enunciation of the Pope's infallibility. With his Holiness rests the power of infallibly deciding for people who will accept his decision what mystery new or old is "*de fide*."

It has been an aim with the majority of writers on Christian art to identify all inscriptions, cyphers, and symbols belonging to the earliest Christian periods with Christian significance. Scarcely a single person has generously collated the most frequently recurrent of such cyphers, with similar cyphers known to have been used by sectaries other than Christian. The materials for such a collation are abundant, and, so far as we know, Mr. Lundy is the solitary individual who has made any attempt in this direction. But he, again, is more often than not led away by his own predilections for establishing the Christian meaning of symbols. The discovery of a piece of plaster rudely scratched with the body of a man, surmounted by the head of an ass, arms extended as though crucified, a little figure on the left, and the Greek inscription, "Alexamenos worships God," raises the ire of Christian antiquaries. Such a thing can be nothing else than a caricature of a most sacred subject. The Rev. Mr. King, in his work on the Gnostics, finds it to be a relic of Gnostic piety. The controversy about it has exercised such German and Italian pundits as are prone to see Christianity in almost all symbolism or cyphers used during the first centuries A.D.

There is no doubt whatever that Pagan symbols were used by Christians. In fact, in the early days, and even as late as Tertullian, the Christians had few symbols or rites distinctively different in appearance from those of other creeds. Mr. King considers that the symbols and rites of the Mithraic religion were frequently used by Christians,—symbols and rites remaining almost the same as before, but the meaning attaching to them alone being modified by Christian thought and precept. Tertullian denounced Mithraic symbols and rites analogous to Christian symbols and rites, as the subtleties of the devil in "mimicking certain things of those that be divine," overlooking the essence of the situation that the worship of Mithras, so popular in Rome, preceded Christianity. We need not discuss why Christians should have adopted Pagan forms for the expression of their faith.

The great area of facts and fancies, covered by the history of art of the Christian period can surely be dealt with in some concise and simple form, without necessarily opening the still wider field of polemical controversy. Each inquirer may have his own peculiar opinion, as to the mysticism of signs and drawings, but this does not touch the matter-of-fact treatment of the condition of a phase of Roman art during the early periods of Christianity. What is much needed is a chronological arrangement of the remains of early art of the first three centuries A.D. carried out in some such plan as that adopted by Agincourt in his "History of Art by its Monuments." The task is no light one. Still the materials are almost to the hand of any one who feels emboldened to attempt it. With these few remarks we must conclude our observations, already too long, and yet too brief in respect of their subject, leaving the doctrinal value of Christian art a bone of contention amongst the partisans of various faiths.

SOME ARTISTIC BOOKS FROM ABROAD.

THE commencement of the new year is always a busy season with the publishers, both at home and abroad. The public certainly cannot complain of not being supplied with ample means of acquiring information. A generation and more has passed since De Quincy's well-known calculation of the impossibility of even the most voracious reader wading through a tithe of the books, not in existence, but appearing annually. Since then the book-market has been yearly more and more active. The spirit of the present day in England seems opposed to complete and costly publications. It is the many, not the few, who have to be considered now. In the production of artistic works the Continent, it must be admitted, stands ahead of us, and the English reader is fortunate who is able to avail himself fully of the stores of information thus placed within his reach.

Let us glance at some of the many works produced abroad. Chronologically, it is certainly with the "Histoire de l'Art dans l'Antiquité" that we should commence; a work, which, in spite of its title, is, in no small measure, addressed to the general public by its authors, M. George Perrot, of the French Institute,—a case-hardened Eastern traveller and professor,—and M. Chipiez, whose architectural abilities largely aid the archæological research of his *collaborateur*, and whose works on the Greek orders and on the Greek monuments in Chaldea are not unknown in this country. In the volume which appears this season we have the history of the parent art of Egypt, the first portion of a series to be devoted to the art of Assyria and Persia, Asia Minor, Greece, Etruria, and Rome. Much as has of late years been written concerning Egypt, it may be said that this work is the first complete and, certainly, the most recent study which we possess of the art of the land of the Pharaohs, the discovery of which so clearly revealed the origins of the long unexplained beauty of Greek art, that debt of gratitude to the East of which Winckelmann and more than one other distinguished archæologist had but the faintest conception. Now, however, the discoveries of recent years have enabled us to sketch out, roughly after all, the history of ancient art,—of the art, that is, which preceded that of Greece. Here, in M. Perrot's volume, we have, in a form befitting the gravity of the subject, the history of Egyptian art from its earliest known commencements in Memphis.

To the first part of this comprehensive work on the art of antiquity, praise must be awarded. The illustrations are chosen with care and from authentic sources. While thus producing a work addressed to the learned, the aim of the authors is none the less to popularise the study of ancient art,—an understanding of the beauty of which, they justly argue, should be no more overlooked in modern education than is the literature of those Classic times the genius of which was so brilliantly manifested in its contemporary artistic creations. As interesting to Egyptologists, let us not forget to mention the recent publication of an excellent Italian work of reference, "Dizionario di Mithologia Egizia," by Lanzoni.

The little "Manuel d'Archæologie Grecque," which takes worthily its place among the books of the season, is one of an important series published under the patronage of the French Government, and of which four volumes of the ultimate hundred have already made their appearance. The series to which these volumes belong, "La Bibliothèque de l'Enseignement de l'Art," is published with the praiseworthy object of supplying to students and the public generally a complete artistic encyclopedia. Within the reach of every purse (the price is barely 3s. for the well-printed volume, profusely illustrated), the "Library of Art Instruction" is intended to supply an expressed want of works to serve as sources of reference to the daily-increasing class of young art students of both sexes to whom the more expensive works are not only impossible of purchase, but far too special. Let it be remarked also that the outside public are largely gainers by the erudition thus afforded in a limited space. In every case the most competent authorities have been insured in the extraordinary list of forthcoming volumes. In the course of the next four months is to appear a fresh series of seven volumes, dealing generally with the subject of art, a *Précis* of the History of Art, Sculpture, Painting, Architecture, Engraving, Ornamentation, and Music. At later intervals we are to have a further series of special volumes on French painters, the Italian, English, Spanish, and modern French schools, ceramics, French and Italian sculpture, an artistic inventory of France, figured mythology, Etruscan and Roman archæology, Gothic architecture, tapestry, Byzantine art, Oriental archæology, French styles, and the modern processes of engraving, with other volumes on the architecture of antiquity, of Italy, of the North; on carving, building, precious stones, bronze, costume, &c. The idea so generously conceived promises positively to work a revolution in the direction intended. The knowledge of art which will by this means be spread will, it is hoped, produce the results which it has been constantly urged would follow on the publication of a series of competent works, dealing technically and artistically with the arts, the study of which is so singularly neglected in our early education. We have come in our country to understand this, though there yet remains an opening for a thoroughly-conceived series such as M. Quantin's "Bibliothèque" promises to prove. Of the "Manuel d'Archæologie Grecque" we may have on another occasion to speak; suffice it to say that on a small scale it is an excellent hand-book, well prepared for the object it is intended to fulfil. The size of the volume prevents any serious display; but as an excellent idea, worthy of note, each chapter is preceded by a short bibliography of works of reference, from which further information may be gained. It is delightful in a work of this kind not to find vamped up a host of the stock wood-blocks that too often do duty on these occasions. Of the 141 illustrations, except a few borrowed from Dr. Schliemann's recent works on Troy and Mycenæ, all have been specially prepared for the book. Of the other volume of the series, that on "Mosaics," by M. Gerspach, with its sixty-eight cuts, the same may be said. The reader has here a complete history of the commencement and development of this interesting and indestructible art, of which Ghirlandajo so truly said that it was "painting for eternity." M. Duval's 'Anatomie artistique" will prove invaluable to many a student unable to purchase the expensive works to which he is generally obliged to refer; while M. Havard's "Peinture Hollandaise" gives a clever sketch of the many painters of what he refuses to call the Dutch "school," on the score that its painters appear to have had no definite aim in view, or to have made no effort to transmit that aim to their successors, the traditions and secrets of each artist being lost at his death.

Another work, one more important, M. Havard has contributed to the list of artistic books of the season, a work entitled "L'Art à travers les Mœurs," in which the lively author who has shown us so successfully the fallacy of our belief in the fogs of Holland, traces, as his title sets forth, the position of art in the development of the world's history. M. Havard is a supporter of the now well-understood *milieu* theory, the influence, that is, of "surroundings," of contemporary feeling, civilisation, and culture on the art of each epoch. In each period, he says, "art appears as the faithful representative of our tendencies, of our needs, of our tastes"; art being, according to the same authority, the direct emanation, the exact product of a determined epoch, by means of its creations, we can unerringly re-constitute that epoch; a general rule to which, however, it may be remarked history affords not a few exceptions. M. Havard, discourses delightfully on his theme, and produces a world of interesting information to support his views. Under such competent direction it is only what might be expected that the illustrations are as excellent as they are numerous.

Of another book treating generally of the arts it may not be out of place to speak here, of the "Grammaire des Arts décoratifs" by the late lamented Charles Blanc, a work which appeared only a few days previously to the death of the industrious Academician. This Grammar of the Decorative Arts serves as a companion volume to the Grammar of the Arts of Design, which appeared some years since; the new work is, in fact, the application to practical purposes of the rules there laid down. It is more particularly to the decoration of the house that the author devotes his attention. As may be imagined, the field is vast. In the small space at our disposal it is impossible to give any analysis of the volume; the views of the French regarding household decoration vary singularly from ours; the English reader, however, cannot fail to gain valuable ideas from the experience of so tried an authority as Charles Blanc. The decoration of the house he wishes us to regard as a duty not only to ourselves, but to our friends; and an indifference to its consideration should be regarded, in fact, as an act of impoliteness. The literary style of the work is of the same fascinating simplicity which the lamented writer was almost the first in France to introduce into the criticism and discussion of artistic matters.

Having deviated somewhat from our chronological order, let us "hark back." We jump from the very modern consideration of household decoration to the days when true decoration was still really understood, as shown in such a work as Herr Man's "Geschichte der Decorativen Wandmalerei in Pompeji," with its plates, which recall the delicate colouring of the originals. The decorative traditions are still in existence in the period which M. Roller has taken as his theme in his work on the Catacombs, "Une nouvelle Exploration des Catacombes," a history of the art and religious beliefs of the first centuries of Christianity. It is still the chain of Classic art which is described by M. Marrast in his "Vie Byzantine au 6e. Siècle," and still in a measure it is the Classic tradition that, revived by the "Precursors of the Renaissance," of which M. Eug. Muntz has so much to tell. It is a story, it is true, that is not now so unfamiliar as it was some years ago. We have learned to respect the works of these earnest pioneers in the difficult path to that ideal perfection which, in the best periods, art has always had before it. After generations of oblivion and even ridicule we now have come to appreciate the grace, the youthful simplicity, the life which breathes under the uncouth exterior of the early efforts of the artists of the Italian Renaissance among whom the architects stand out so grandly. M. Muntz, who has told us so much concerning the art of Italy, and whose name is familiar to all readers of the *Revue des Deux Mondes*, *L'Art*, and the *Gazette des Beaux Arts*, relates in his new volume the story of the revival of the Classic traditions; we are warned that it is no history of the movement, yet the reader is given an ample sketch of the extraordinary period which stretches from the thirteenth to the sixteenth century. It is, of course, with Nicolo Pisano that the artistic revival opens, the premature efforts of that Classico-Gothic artist preceding, let it be remarked, some sixty or seventy years the literary revival led by Petrarch and Boccaccio. We are presented, it is true, with no new ideas, but certainly with no want of facts, references, arguments, and especially, illustrations. By the same author should be mentioned a no less interesting work, "Un Mecène au XVe. Siècle," Art and Letters at the court of the Popes during the brilliant fifteenth century. Here, however, a whole mass of new facts have been dragged by the author from the obscurity of the Roman libraries, where his earnest search has succeeded in unearthing a precious mine of unpublished manuscripts and documents relating to the artists employed by the Popes. Another work bearing much on the same subject should not be passed over, "Sig. Bertolotti's "Artisti Lombardi a Roma"; the industrious writer who has already told us so much of the Belgian and Dutch painters in Rome, of Benvenuto Cellini, and of Borromini the architect, has now gathered a mass of information relating to the Lombard artists employed during the last five centuries in Rome. From the days of the *magistri comacini*, Lombardy largely supplied the Papal capital with its artists, painters, sculptors, and architects, *stuccatori*, *intagliatori*, goldsmiths, &c., and of these Sig. Bertolotti has much to tell.

M. Charles Yriarte has given us a new and richly illustrated work, entitled "Un Condottiere au XVe Siècle," an interesting account of the "cultivated court" of the Malatesta at Rimini, where Leo Batista Alberti built, for the famous Sigismund, his master-piece, the Church of San Francesco. Dealing with the same period, too, is M. Heiss's "Medailleurs de la Renaissance," a superbly illustrated series, commencing with that master medallist, Vittore Pisano. To that fascinating land of the arts, Italy, there are many other interesting works devoted; one deserves mention, "La Vie privée à Venise," by Signor Molmenti, a French translation of a work brimful of curious facts and anecdotes.

M. Ephrussi's superb volume on "Albert Dürer et ses Dessins," with its rare and exquisite reproductions of the drawings of the Nuremberg master, will be welcomed by all art-lovers. We have heard from many sources the incidents of the sad life of the industrious artist. M. Ephrussi has now used as his mine of research, the mass of drawings by Dürer, which are scattered over Europe. These, it is usually stated, number about 300; there are, our author assures us, over 1,200, not one of which has he failed to examine. We have reproductions in the volume of 100 drawings in the text, and thirty more on separate pages.

We find Van Dyck's life and familiar portraits, so many of which are of historical characters in our English history, the subject of a richly-illustrated folio, by M. Guiffrey, in one of the series which Quantin has been publishing annually, and of which we have already reviewed the "Holbein" and the "Boucher." Another volume of the season presents the public with a number of spirited etchings, by M. Unger, from the pictures of Franz Hals, the boisterous friend of the refined Van Dyck, "Eaux fortes d'après Franz Hals," a work, the text of which, though written in French, comes from the country of the painter. The life of Correggio proves, at the hands of Mme. Mignaty, a countrywoman of the refined Parma painter, a charming artistic study ("Le Corrège").

Germany has produced among many books deserving mention a valuable work on costume, the continuation of Herman Weiss's "Kostume-Kunde," dealing more especially with the costume of antiquity, while the brothers Egger have devoted much interesting study to the life of the gifted German sculptor "Daniel Rauch"; Herr Lübke has published an enlarged edition of his "Geschichte der Renaissance in Deutschland," in which he holds up as an incentive to the modern Germans the great deeds of their ancestors.

Important additions have been made by Turgan to his valuable work on the great manufactories of France, "Les grandes Usines," while mention should not be neglected of M. Guérin's valuable publication on the Holy Land, "La Terre Sainte," its history, sites, and monuments, the work of an industrious artistic and archæological traveller in a country fraught with even more than the usual interest that is always attached to a foreign land. Messrs. Hachette have published an illustrated modern text of the "Histoire du gentil Seigneur de Bayard"; Sig. de Amici's "Marocco" has been translated into French, and with its illustrations worthily takes its place beside M. Gourdault's "Suisse" and "Italie," and Doré's and Davillier's "Espagne." Messrs. Audsley & Bowes's hand

some work on the ceramic art of Japan has met in France with a greater success than even in our country, and Didot has reprinted the edition in a more convenient form, and with the addition of numerous illustrations. Another work on the "History of Ceramics," by M. Garnier, is worthy of note. Paul Lacroix has completed his well-known and richly-illustrated series by his volume on the "Letters, Science, and Arts of the Seventeenth Century"; and M. Clement, the art-critic, has enlarged his work,—which has already been translated into English,—on Michelangelo, Raffaelle, and Leonardo da Vinci, into an illustrated volume of the greatest interest.

THE DUDLEY GALLERY.

THE "General Exhibition of Water-colour Drawings," which opened this week, presents no very marked feature to distinguish it from similar exhibitions of other years. It is rather strong in landscape, and if anything rather less strong than usual in figure subjects. Among the landscapes some of the best are the small works by Mr. Alfred Parsons, such as "In the May Time" (32), "Meadows by the Thames" (48), and others, presenting the characteristics of a style which is now well known in English picture-galleries; a style which owes something to Corot, though the resemblance is more traceable in the artist's oil paintings than in his water-colours. The first-named drawing is a beautiful little work. Mr. Joseph Knight's large drawing, "Lingering Light" (199), at the top of the room, is a more ambitious work in regard to subject than this artist usually paints; it represents the side of a great hill, filling up nearly the whole field of view, on which the last gleams of the evening light are thrown, while the base of the hill and the foreground are in twilight. The drawing displays those quiet brown tones with which we are familiar in all this artist's productions, and which he seems to see in every scene; it is not a powerful drawing, but it is at least a very beautiful and highly-finished one. Flanking this are two large works by Mr. Arthur Severn, "Ice on the Thames at Battersea" (186), and "Rising Tide, Sark" (203); the former a very beautiful water landscape, the latter rather a failure, owing to the very tame and mannered treatment of the sea. Mr. K. Macaulay shows us a new method in the spotty and stippled treatment of water in "A West Highland Fishing Town" (5), and "An Idle Hour at the Quay" (149), effective but rather too palpable mannerisms. Mr. A. B. Donaldson's "Old Bridge at Lincoln" (137) is a fine study of old houses and water in those warm, sometimes rather heated, tones which he affects; he succeeds in impressing us, however, with the sentiment of the scene, in which he rarely fails. He treats also the well-worn subject of "Rome from the Pincian Hill" in a small drawing (368). Among less hackneyed subjects may be noticed a fine and powerful drawing by Mr. H. A. Harper, "Jerusalem: Sunrise" (265), showing the varied piles of the holy city, partly lighted by the rays of the rising sun, the whole looking as if the buildings had been tumbled together by some incomprehensible caprice. Mr. Pilleau's small drawing, "The Two Colossi, Thebes, during an Inundation of the Nile" (268), is a very delicately-toned and aërial little work, very small in scale, but not without solemnity of effect: the two colossal blocks, reminding one of the description of the giants in Dante's "Purgatorio," rise out of a waste of water that has overflowed the land round them. A drawing, called "Clover" (401), by Mr. Max Ludly, a name new to us, deserves notice; it is a scene in which a clover field, rising from the foreground to a high horizon in the middle distance, is the principal subject, crowned at the highest point by a group of trees. "Oak Valley, Cannock Chase," by Mr. Birtles (259), is a very beautiful little landscape, remarkable especially for the soft aërial tone of the distance. In a grander key, though on a small scale, is Mr. H. Moore's "Glen Dochart, Late Autumn" (85), a dark Highland scene, with a cold snow-covered hill-side in the background, the scale and perspective of which are very finely given. Among other landscapes may be mentioned a very fine, free, powerful work, by Mr. Edwin Ellis, "Sand Hills, North Wales" (38), recalling the style of David Cox; "A Trout Stream," by Mr. W. G. Addison; "An Invitation to Dinner" (54), a landscape with two figures, those of a woman and a duck, the general effect in which is good, but the trees are too much in the "seaweed" manner which some landscape-painters now affect; the "Marsh Mill" (103), by Mr. A. W. Weedon; "By the Wayside," by Mr. W. G. Addison (161); "On the Ouse, Bromham," by Mr. R.W. Fraser (424), a drawing very faithfully rendering the appearance of that sluggish but in its way pleasant river, with its borders of pollard willows; and in the centre of the screen is a study of foreground, boulders and the stumps and stems of trees, entitled "In the Pass of Killicrankie" (611), by Mr. Ruskin, which strikes us as deficient in the facts of local colour and texture,—the realism, in short, which alone can render such a subject really interesting; we have seen much better artist's work by Mr. Ruskin than this.

Among the drawings in which figures play an important part is a really original and clever one by Mr. A. Melville, the "Interior of a Turkish Bath" (181). The treatment, from an artistic point of view, of scenes of everyday life such as this is always interesting when well done; indeed, we have not nearly enough of it, and this is exceedingly well done. The hot, dimly-lighted interior, with the circle of figures in placid and luxurious ease, is made into a most effective picture, somewhat unusual in manner and tone, and reminding us a little at first glance of some of the Eastern interiors and other scenes by Anatole de Beaulieu. Mr. Joseph Clark has a pleasant little picture, a cottage-door scene, under the title "Good Night, Father" (39); and Mr. Dollman's "Les Misérables" (138), may be grouped or contrasted with this. It is a cottage exterior, where a man and his dog have been eliminated from the cottage on washing-day, and compelled to take up their quarters outside. The man has his pipe to partially console him; the dog is not so fortunate, and his expression constitutes a bit of canine humour, or humour in canine painting, as good in its way as Mr. Caldecott's dogs in the illustrations to a well-known nursery rhyme. Miss Linnie Watt's "Far from the Madding Crowd" (258) shows a very graceful and natural figure of a girl resting on the ground in the seclusion of the wood, and the landscape is as good as the figure. Of Mr. Arthur Stocks's two companion works, "Raising the Ghost" and "Laying the Ghost" (303, 321), the ghost being of the old sheet and turnip-lantern variety, the first hardly seems a good enough joke to have been worth painting, but in the second the contrast between the irate face of the master with his cane, who has "laid" the ghost, the frightened perpetrator of the deed, and the half-human expression on the overthrown turnip-lantern, is amusing enough, and well worked out. "Mothers' Meeting," by Miss Caroline Paterson, a small drawing of two young girls with their dolls, is both very well executed and marked by very delicate humour. There are other more or less pleasant figure subjects, but none that are particularly noteworthy. In landscape, however, there is more of force, vigour, and variety of style, and less of mannerism, than is sometimes the case in this exhibition.

THE RIGHT OF SUPPORT TO BUILDINGS BY BUILDINGS.

THE now famous case of Angus *v.* Dalton, or rather Dalton *v.* Angus, as it actually is in its latest and most important stage, namely in the appeal to the House of Lords, has quite recently received a supplement in the decision of Vice-Chancellor Hall in the case of Lemaitre *v.* Davis, 50 *Law Journal*, Chancery Division, p. 173. In Dalton *v.* Angus it was settled once for all that the owner of buildings has a right to support for such buildings from the adjacent land when they have been in existence for a period of twenty years. This conclusion was, as some of our readers will at any rate remember, arrived at on different grounds by the judges who advised the House of Lords and by the judicial members of that House themselves. Lord Selborne distinctly and boldly gave it as his opinion that the right to support was a right within the Prescription Act, and therefore that twenty years' enjoyment gave an absolute statutory right to support. Lord Blackburn, without denying that the Lord Chancellor's opinion was correct, yet based his judgment on the ground that an enjoyment of the right for a period of twenty years gave the owner, so to speak, of such enjoyment a prescriptive title to the right to support; and among the judges Mr. Justice Fry came with regret to the conclusion that a long series of judicial decisions had so formulated the law as to make it impossible to hold that twenty years' enjoyment did not give a right, though such law was based on no principle at all. Such, then, was the case of Dalton *v.* Angus, to which Vice-Chancellor Hall has just added a very important and legally logical sequel.

The result of Lemaitre *v.* Hall may be stated in half a dozen words. It was therein judicially decided that not only does an enjoyment of support for twenty years give buildings a right to such support from adjoining land, but also from adjoining *buildings* as long as such enjoyment has been neither secret, nor by force, nor discontinuous. This, it will at once be seen, is a most important development of the case in the House of Lords, and one which may have important practical consequences. As Vice-Chancellor Hall truly says, it is impossible to find a distinction in legal principles between the right to support from land for buildings and from buildings for buildings. The right of support by land to land, which it was decided long ago was a right given by English law, is one which differs from the right of buildings to support from adjoining land, because the former is a natural right which attaches to the possession of the land. But a right of support to buildings is a different right in its inception, being of a quasi-artificial character, and therefore whether it be land or buildings by which buildings are supported matters not. If the owner of buildings obtains a right to support from his neighbour's land because the land has supported his buildings for twenty years, and whether it is held that this right arises from the operation of the Prescription Act, or from actual enjoyment, whether founded on the fiction of a lost grant or not, or from the actual state at which English law has arrived, equally also if it be buildings which have supported buildings, the right must be created. Vice-Chancellor Hall, in his judgment in Lemaitre *v.* Davis, seemed to consider he must rest his opinion on the fact that Lord Selborne held that the Prescription Act applied to such a right as the one in question. It does not seem necessary to make the right depend solely on the operation of this statute. As long as there is no logical and legal distinction between the right to support from land and buildings, the conclusions of the House of Lords in Dalton *v.* Angus must be applicable, whether based on the ground stated by Lord Selborne or the other members of the Court.

But there is, as it seems to us, a distinction of some practical importance between the case of support from land and support from buildings. In Angus *v.* Dalton, Lord Selborne stated that against such a servitude as that claimed in the case before him the owner of the adjoining land "has his own remedy, if he chooses to prevent and interrupt it. That power of resistance does, and must in all such cases, exist. They (the servitudes) can always be interrupted, and that without difficulty or inconvenience, when a man wishes and finds it for his interest to make such a use of his own land as will have that effect." Soon after the House of Lords delivered their judgment, in our comment on it we pointed out that such interruptions as the Lord Chancellor points to were, in the case of support from land to buildings, by no means so easy as he seemed to think, and that to let down your land, and so let down your neighbour's house, was quite a different thing from putting a hoarding in front of his window or a bar across a pathway. Now this objection is still more forcible in the case of support from buildings. Mr. Justice Fry, in the course of his interesting opinion, says, "Is the support of the house by the adjoining soil preventible? I think not. It is, of course, physically possible for one man so to excavate his soil as to let down his neighbour's building, and a man may or may not have occasion to excavate his own land for his own purposes, but such an excavation for the sole purpose of letting down a neighbour's house is of so expensive, so difficult, so churlish a character, that it is not reasonably to be required to prevent the acquisition of a right," and he thus proceeds: "In fact, in the case of adjoining houses it would be to require a man to destroy his own property in order to protect his right to it." This, more forcibly than we can put it, sums up the practical objection to this recent development of Dalton *v.* Angus: to prevent the acquisition of the right it requires "a man to destroy his own property in order to protect it." It must be confessed this is somewhat a

reductio ad absurdum of the doctrine of the House of Lords; but it must also be confessed that it is a perfectly logical conclusion. In the case before Vice-Chancellor Hall, the actual building was a cellar belonging to an inn called the Mitre Tavern, and it, together with the wall of the tavern, was injured by the support from the adjoining buildings being taken away in the course of their demolition for the purpose of improvement. In such a case as this it seems difficult to see how any practical step can be taken to prevent the acquisition of the right; for whether is it worse to destroy your own building to prevent your neighbour gaining a right which may at some future time be a cause of grave inconvenience to you, or to let such right be gained, and take the chance of its never being burdensome? It may, perhaps, be said, that if you threaten your neighbour, then, unless he will admit that he only has the right to support by your permission, and only for so long a time as you choose to let him have it, you will destroy your own building so as to prevent the acquisition of the right, he will at once make the required admission. But experience must have sufficiently shown us that there are scores of persons who, knowing the grave inconveniences and the great expense which must attend the carrying out of such a threat as this, will refuse to make any such admission, and trust to the inconvenience and expense preventing their neighbour from carrying his threat into force. There are, of course, other and well-known arguments to be urged on the other side, especially that it is expedient that a right after being enjoyed for a certain time should become absolute. Into these we do not propose to enter, they are at the bottom of all kinds of prescriptive titles, whether to light, to roads, or to the absolute possession of landed property. But it was impossible, in commenting on and pointing out this important extension of the doctrine finally fixed as a part of the positive law of this country, by the case of Dalton *v.* Angus, which is caused by the judgment of Vice-Chancellor Hall in Lemaitre *v.* Davis, not to show at the same time the grave difficulty which exists in preventing the acquisition of this right. The difficulty was noticed in Dalton *v.* Angus, and was deliberately considered to be one which did not overrule the more important benefit of a prescriptive title to the right to support from land. It possibly may have to be considered by the same high tribunal at some future day in relation to the support of buildings, but meanwhile, as long as Lemaitre *v.* Davis is good law, building-owners must submit to it as best they can.

FIFTY-SIXTH EXHIBITION OF THE ROYAL SCOTTISH ACADEMY.

THESE exhibitions depend, in a great measure, for their attractiveness upon pictures which have been formerly exhibited elsewhere, many of them being works of Members and Associates of the Academy, and these frequently their most important productions. This year there are fewer large canvasses than usual, and although examples of the handiwork of Millais, Alma Tadema, and others, have graced former exhibitions, there are none such in the present one.

Mr. Lockhart's brilliant and effective "Cid and the Five Moorish Kings," which held the place of honour at the last Manchester Exhibition, holds a like position here, and there is a portrait of the artist by Mr. Pettie, a head in profile, upon an heroic scale, in which the strongly-pronounced colouring that characterises the works of the sitter has been emulated by the painter of his portrait. It is a *tour de force* in oil colours upon canvas, such as is more usually produced in the form of a bas-relief in bronze.

Mr. Hugh Cameron's "Funeral of a Little Girl on the Riviera," is the most important work he has produced, and is to form one of the permanent attractions of the Dundee Public Gallery. For simple pathos, purity of colour, and rendering of open-air sunshine, it holds a high place, and it is remarkable for the absence of that forced exaggeration of colour, detail, and texture which is apt to be engendered by the desire to catch the eye in a public exhibition. Mr. MacWhirter exhibits a very attractive view of "A Valley by the Sea," in which birch trees (which are his speciality) appear in combination, with a foreground of ferns and brushwood, where hares enjoy a respite from persecution. In the distance appears a village, and beyond an expanse of sea glittering in the warm summer sunshine.

Mr. Colin Hunter's "In the Gloamin'," affords him scope for the rendering of the rippling surface of an arm of the sea touched by the last gleams of sunshine, upon which appears a flotilla of fishing-boats, the broken reflections of which are deftly rendered. The scene is closed by an amphitheatre of purple hills against a glowing sunset.

Mr. H. F. Lawson's picture, entitled "Her Father's Home," representing a poorly-clad flower-girl peering into a church, where the rite of baptism is being performed, is not without suggestiveness of the kind found in periodicals of the good type; but it is larger in scale than the subject seems to call for, the figure is rather loosely drawn, and the pervading tone of colour is an unpleasant yellow.

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ture, and we understand that the award was made under the feeling that, *outré* as the selected design is in character, it nevertheless showed more force and originality, and in some respects better planning, than any of the others. On examining the designs generally, we admit that we should have some difficulty in deciding what other could be fixed upon for the prize. After eliminating some decidedly youthful and feeble designs from among the fourteen, the remainder which could have been considered at all in reference to the prize are exceedingly deficient in originality, and present very ordinary and sometimes very defective plans. Had the decision gone by the external architectural effect only, we should certainly have preferred either "Union" or "Pall-mall" for the prize. The latter, which has a medal of merit awarded to it, is a Jacobean design, with large bays running through all the stories, and very effectively treated, and it certainly combines picturesque effect with sufficient suitability of style for its object. "Union" is a late Decorated Gothic of domestic type, with square-headed transomed windows, and is a very pleasing building in general effect. The plans in both are defective in arrangement: in "Pall-mall" the lavatory is on the second floor, and the windows are too small. The plan of the selected design, "El Dorado," is superior in compactness and general arrangement to these, and would be also a more effective interior. The author of it shows a great deal of ability, and if he will give more attention to the practical side of architecture, and learn not to regard it as an excuse for indulging in wild and grotesque grouping, he may very likely, at a more advanced period of his studies, show that the choice of the Council has not been a misplaced one. Still, while there is so much complaint being made as to the unpractical character of the architectural profession, and efforts to turn the tide of study into a more practical direction seem to meet with so little success, we certainly regard it as unfortunate that the Institute should have appeared to directly sanction this kind of picture-making, however cleverly displayed; they might have possibly done better to withhold the prize, as a practical indication that none of the competitors had shown a proper appreciation of the problem put before them.

Of the drawings submitted for the Institute Silver Medal, the one to which the Medal is awarded is far away the best; the other two, in fact, have no claim to compete with it. The building illustrated is St. David's Cathedral; the other two competitors furnish drawings of Old Shoreham Church and Stokesley Castle respectively. The drawings look as if care had been exercised in regard to correctness, but they are rather tamely executed.

The Grissel Medal is one of the few direct encouragements which are given in the Institute to purely practical architecture; in this case the subject is the design for a bridge. The prize in this case also admits of no dispute; the author of it has gone into the construction of foundations, abutments, and roadway with much more attention than is exhibited in any of the other designs, and his work is remarkable for beautiful and accurate drawing also. He adopts an elliptic arch of large span and very flat crown,—dangerously flat if the bridge were on a large scale; but he has appreciated the practical requirements in such a case by the provision of a wide central waterway. The Gothic design by another competitor, with narrow pointed arches springing from very near the water level, looks well enough, and resembles in these particulars many picturesque though inconvenient old bridges; but it would be absurd to submit such a design for a navigable river now; no one would accept it; it would be regarded as practically choking the navigation. Such a bridge now-a-days would be too truly, according to the author's motto, a "*pons asinorum*."

The Architects of the Oratory.—One of the gentlemen named as the architects of this building in our notice last week, requests us to say that the other gentleman mentioned is not associated with him in the work; but as the other gentleman, not many weeks ago, writing in the name of both, requested us to state that the building was under their joint care, we must allow them to establish their special rights in some other way. There has been a mystery about the affair from the commencement, and we are not concerned in unravelling it.

ROYAL INSTITUTE OF BRITISH ARCHITECTS: PRIZES.

AT the Special General Meeting, held on the 6th March, Mr. Horace Jones, Vice-President, in the chair, before the business of the evening commenced the Chairman invited the meeting to direct the Secretaries to convey to the Patron of the Royal Institute of British Architects, her Most Gracious Majesty, a dutiful assurance of deep thankfulness that it has pleased Almighty God to preserve the Queen's life in the midst of great danger, a life deservedly dear to every British subject no less than to the Members of the Institute, and to humbly express a hope that the Queen's life may be long preserved to the benefit and happiness of her people. This having been carried by acclamation, the Hon. Secretary announced that—

Arthur John Gale, Associate, had been elected by the Council to hold the Godwin Bursary for the current year, and that he proposed to travel in America.

It was resolved that, subject to Her Majesty's gracious sanction, the Royal Gold Medal for the year 1882 be presented to Baron von Ferstel, Architect, Hon. & Corr. Member (Vienna).

The Tite Prize (Value £30).—The Secretary announced that, in consequence of the inferior character of the designs and drawings submitted this year for the Tite Prize, the Council had decided not to give the Prize. The number of competitors was four.

The Grissell Medal.—Subject: A Stone Bridge. List of Competitors: No. 1. Device: the "Pons Asinorum"; No. 2. "Imperishable"; No. 3. "Juvat impigros Deus"; No. 4. "Ad valorem"; No. 5. "Periander."

The Secretary announced that the Council had awarded the Grissell Medal to the author of the design (No. 2) bearing the motto "Imperishable"; and that the Council regretted their inability to award a Certificate of Honour to the author of the design (No. 5) bearing the motto "Periander." The name and address of the successful candidate were found to be:—H. Phelps Drew, 17, Sulgrave-road, West Kensington-park, W.

The Soane Medallion and Fifty Pounds.—Subject: A Design for a West-end Club. List of Competitors: No. 1. "El Dorado, Yo hé Trovado"; No. 2. "L"; No. 3. "Pecksniff": No. 4. "Che sarà, sarà"; No. 5. "Renaissance"; No. 6. "Pall Mall"; No. 7. "Tempus fugit"; No. 8. "Union"; No. 9. "They dreamt not of a Perishable Home who thus could Build"; No. 10. "Mediocria Firma"; No. 11. "Dispatch"; No. 12. "Gamma"; No. 13. "Work and Despair Not"; No. 14. "Mousis."

The Secretary, having read the recommendations of the Council respecting the award of the Soane Medallion and (subject to the usual conditions) £50, stated that the Committee for Medals and Prizes had specially reported thereon, and that the Report, which had been adopted by the Council, was as follows:—

Your Committee have to report that, although the number of Competitors (14) for the Soane Medallion this year is larger than usual, the practical qualities of the designs as regards the distribution of plan do not carry out the recommendations of the Council, viz.:—"That the candidates should apply themselves to the useful and practical embodiment of the specified accommodation," and in those plans where an attempt has been made to grasp the special requirements of a West-end Club, the elevations show a want of that dignity, breadth, and, it may be added, character of design, which should distinguish a building of that class. Having arrived at the decision that no one design embodied, in plan and elevation, the requirement asked for, the Committee proceeded to re-examine all the drawings, to see which of the competitors had displayed the greatest amount of thought and study on the whole design, and they arrived at the conclusion that the design marked "El Dorado, Yo hé trovado," though wanting in the character usually ascribed to a West-end Club, displayed so much thought and study and so much originality and talent in the design of the elevation, section and perspective, that they recommend its author to be the recipient of the Soane Medallion. The Committee further recommend that a Medal of Merit be accorded to the author of the design bearing the motto "Pall Mall," as having produced a carefully studied plan, and an honourable mention to the design bearing the motto "Union" for considerable merit in the perspective drawing. The Committee regret that the design bearing the motto "Dispatch" was not completed, so as to have given it a chance in the award.

Whereupon it was resolved—That the Soane Medallion and (subject to the usual conditions) £50 be awarded to the author of the design (No. 1) bearing the motto "El Dorado, Yo hé Trovado." The name and address of the successful candidate were found to be—Arthur Beresford Pite, 44, Bloomsbury-square.

Resolved—That a Medal of Merit be awarded to the author of the design (No. 6) bearing the motto "Pall Mall." The name and address of this gentleman were found to be—Leonard Stokes, 13, Holland-street, Kensington, W.

Resolved—That a Certificate of Honour be awarded to the author of the design (No. 8) bearing the motto "Union." The name and address of this gentleman were found to be—G. H. Shackle, 8, Great Marylebone-street, W.

The Institute Silver Medal and Five Guineas: Drawings.—Subject: For the best illustrations, drawn from actual measurement, of any important building — Classical or Mediæval — hitherto unpublished in that manner. List of Competitors:—No. 1. "Spes"; No. 2. "Grosvenor"; No. 3. Device of a Leaf.

Resolved—That the Silver Medal of the Institute and Five Guineas (Drawings) be awarded to the author of the drawings (No. 2) bearing the motto "Grosvenor." The name and address of the successful candidate were found to be—Thomas T. Scott, 14, Bank-street, Carlisle.

Resolved—That a Certificate of Honour be awarded to the author of the drawings (No. 3) bearing the device of a leaf. The name and address of the successful candidate were found to be—R. Elsey Smith, Laurel Bank, Forest Hill.

With reference to this award it was subsequently resolved—That, in future, the sum of Ten Guineas (instead of five guineas) be annually given with the Institute Silver Medal for measured drawings, and that, in the present instance, an extra sum of five guineas be presented to the successful candidate, Mr. Thomas T. Scott.

The Institute Silver Medal and Ten Guineas; Essays.—Subject: The stall-work, canopies, and rood-screens of the fifteenth century (English only). No. 1. "Perspicuity."

Resolved—That the Silver Medal of the Institute and Ten Guineas (Essays) be not awarded this year, and that the same subject be given next year.

PROPOSED AMENDMENT OF THE METROPOLITAN BUILDING ACT.

CUBICAL CONTENTS OF WAREHOUSES.

AT the meeting of the Metropolitan Board of Works on the 3rd inst., the following report was presented by the Building Act Committee:—

"Your committee have to report that they have considered the letter from Mr. R. D. Dalby, chairman of the Fire Offices Committee, expressing a hope that the Board will consent to withdraw the 19th Clause in the Metropolis Management, Building, and Floods Prevention Acts (Amendment) Bill, referred by the Board on the 27th of January last. This clause gives the Board power in certain cases to authorise the construction of warehouses or other buildings used for the purposes of trade and manufacture, containing more than 216,000 cubic feet, without divisions by party-walls. The Fire Offices Committee have submitted to your committee, who were authorised by the Board to confer with a deputation from that body, that any increase in the cubical contents of buildings of this description would be fraught with great danger to the public, and would increase the expense of fire extinction in the metropolis. Your committee, having fully considered the representations made to them, are of opinion that the clause in question should not be proceeded with, and they therefore recommend that the Solicitor be instructed at the proper stage to take measures for the withdrawal of the clause from the Bill."

Mr. Deputy Saunders, Chairman of the Committee, moved the adoption of the report.

Mr. Richardson thought the Board should decline to withdraw the clause in question. If they were beaten in Parliament, they could then withdraw; but after the attention and consideration that had been given to the subject, the Board ought not to give way at the first sign of opposition.

It was pointed out by several members, however, that the retention of this clause might imperil the passing of the other portions of the Bill; and Mr. Freeman said he was afraid that this was one of the cases where they must stoop to conquer.

The motion was carried.

The National Standard Land Mortgage and Investment Company (Limited) notify that they have declared an interim dividend at the rate of 5 per cent. per annum.

reductio ad absurdum of the doctrine of the House of Lords; but it must also be confessed that it is a perfectly logical conclusion. In the case before Vice-Chancellor Hall, the actual building was a cellar belonging to an inn called the Mitre Tavern, and it, together with the wall of the tavern, was injured by the support from the adjoining buildings being taken away in the course of their demolition for the purpose of improvement. In such a case as this it seems difficult to see how any practical step can be taken to prevent the acquisition of the right; for whether is it worse to destroy your own building to prevent your neighbour gaining a right which may at some future time be a cause of grave inconvenience to you, or to let such right be gained, and take the chance of its never being burdensome? It may, perhaps, be said, that if you threaten your neighbour, then, unless he will admit that he only has the right to support by your permission, and only for so long a time as you choose to let him have it, you will destroy your own building so as to prevent the acquisition of the right, he will at once make the required admission. But experience must have sufficiently shown us that there are scores of persons who, knowing the grave inconveniences and the great expense which must attend the carrying out of such a threat as this, will refuse to make any such admission, and trust to the inconvenience and expense preventing their neighbour from carrying his threat into force. There are, of course, other and well-known arguments to be urged on the other side, especially that it is expedient that a right after being enjoyed for a certain time should become absolute. Into these we do not propose to enter, they are at the bottom of all kinds of prescriptive titles, whether to light, to roads, or to the absolute possession of landed property. But it was impossible, in commenting on and pointing out this important extension of the doctrine finally fixed as a part of the positive law of this country, by the case of Dalton *v.* Angus, which is caused by the judgment of Vice-Chancellor Hall in Lemaitre *v.* Davis, not to show at the same time the grave difficulty which exists in preventing the acquisition of this right. The difficulty was noticed in Dalton *v.* Angus, and was deliberately considered to be one which did not overrule the more important benefit of a prescriptive title to the right to support from land. It possibly may have to be considered by the same high tribunal at some future day in relation to the support of buildings, but meanwhile, as long as Lemaitre *v.* Davis is good law, building-owners must submit to it as best they can.

FIFTY-SIXTH EXHIBITION OF THE ROYAL SCOTTISH ACADEMY.

THESE exhibitions depend, in a great measure, for their attractiveness upon pictures which have been formerly exhibited elsewhere, many of them being works of Members and Associates of the Academy, and these frequently their most important productions. This year there are fewer large canvasses than usual, and although examples of the handiwork of Millais, Alma Tadema, and others, have graced former exhibitions, there are none such in the present one.

Mr. Lockhart's brilliant and effective "Cid and the Five Moorish Kings," which held the place of honour at the last Manchester Exhibition, holds a like position here, and there is a portrait of the artist by Mr. Pettie, a head in profile, upon an heroic scale, in which the strongly-pronounced colouring that characterises the works of the sitter has been emulated by the painter of his portrait. It is a *tour de force* in oil colours upon canvas, such as is more usually produced in the form of a bas-relief in bronze.

Mr. Hugh Cameron's "Funeral of a Little Girl on the Riviera," is the most important work he has produced, and is to form one of the permanent attractions of the Dundee Public Gallery. For simple pathos, purity of colour, and rendering of open-air sunshine, it holds a high place, and it is remarkable for the absence of that forced exaggeration of colour, detail, and texture which is apt to be engendered by the desire to catch the eye in a public exhibition. Mr. MacWhirter exhibits a very attractive view of "A Valley by the Sea," in which birch trees (which are his speciality) appear in combination, with a foreground of ferns and brushwood, where hares enjoy a respite from persecution. In the distance appears a village, and beyond an expanse of sea glittering in the warm summer sunshine.

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THE room at the Institute of Architects has been filled during part of this week with drawings sent in competition for the various prizes which, as elsewhere mentioned, were awarded at the meeting last Monday. They exhibit a great amount of labour, but not in all cases an equally satisfactory evidence of thought or consideration applied to the real ends intended to be promoted by the competitions. The drawings submitted for the late Sir W. Tite's prize for designs in the Italian style were not considered by the Council to be such as to justify them in awarding the prize at all; and, with every kind disposition towards the students, we cannot but concur in this decision. The designs submitted for this prize are, in fact, so much below the average of merit in the other cases, that we see in them evidence of a decided indifference on the part of the rising architectural generation to the style the study of which Tite desired to encourage. This is to be regretted. The type of architecture which is now included under the term Italian is one which is peculiarly worthy of study, not only because it has produced what in many ways may be called the most suitable style for town buildings of the higher class, at once stately, elegant, and applicable to the practical wants of modern life, but also because it is a style of architecture full of suggestions which may very well be worked out into new forms, and afford the basis for a good deal of really original treatment. That so many young architects should be content to run after and to copy baldly the poor and *rococo* detail of the Queen Anne style, and that they should turn away with indifference from the far more refined ideas and details of Italian architecture, seems to indicate a great want of feeling for the distinction between refinement and debasement in architectural style.

We do not draw this latter contrast, it is true, from the drawings actually sent in to the Institute, as Queen Anne style, *pur sang*, is conspicuous by its absence in this year's designs. We only compare the number of Queen Anne designs to be seen constantly in professional competitions, often obviously by clever young architects, with the indifference to the suggestions of Italian architecture, of which the Tite competition this year is only one instance. In the award made in the principal competition,—that for the Soane Medallion,—we are somewhat startled by an apparently spasmodic reaction in favour of the most violent and "wolfish" type of Gothic. The perspective view of the prize design, considering that it is for a town club-house, looks at first sight like a sombre kind of joke. It represents a Gothic building of the wildest type, in the midst of a Gothic town of the wildest type, bristling with towers and turrets, and so shaded as to convey the impression at first that large quantities of ashlar facing have come off in great patches, leaving the brick backing visible. Were this design publicly exhibited as the one which the central body of architects had selected as most worthy of praise among designs for a town club, we much fear that the irreverent public would indulge in some of that jeering which it is now so fashionable to indulge at the expense of the much-misunderstood and maligned profession of the architect. There are, however, two sides to the matter. In bestowing the Soane Medallion, the Council of the Institute have also to consider as to the bestowal of the legacy of fifty pounds to assist the student in travelling and studying architec-

ture, and we understand that the award was made under the feeling that, *outré* as the selected design is in character, it nevertheless showed more force and originality, and in some respects better planning, than any of the others. On examining the designs generally, we admit that we should have some difficulty in deciding what other could be fixed upon for the prize. After eliminating some decidedly youthful and feeble designs from among the fourteen, the remainder which could have been considered at all in reference to the prize are exceedingly deficient in originality, and present very ordinary and sometimes very defective plans. Had the decision gone by the external architectural effect only, we should certainly have preferred either "Union" or "Pall-mall" for the prize. The latter, which has a medal of merit awarded to it, is a Jacobean design, with large bays running through all the stories, and very effectively treated, and it certainly combines picturesque effect with sufficient suitability of style for its object. "Union" is a late Decorated Gothic of domestic type, with square-headed transomed windows, and is a very pleasing building in general effect. The plans in both are defective in arrangement: in "Pall-mall" the lavatory is on the second floor, and the windows are too small. The plan of the selected design, "El Dorado," is superior in compactness and general arrangement to these, and would be also a more effective interior. The author of it shows a great deal of ability, and if he will give more attention to the practical side of architecture, and learn not to regard it as an excuse for indulging in wild and grotesque grouping, he may very likely, at a more advanced period of his studies, show that the choice of the Council has not been a misplaced one. Still, while there is so much complaint being made as to the unpractical character of the architectural profession, and efforts to turn the tide of study into a more practical direction seem to meet with so little success, we certainly regard it as unfortunate that the Institute should have appeared to directly sanction this kind of picture-making, however cleverly displayed; they might have possibly done better to withhold the prize, as a practical indication that none of the competitors had shown a proper appreciation of the problem put before them.

Of the drawings submitted for the Institute Silver Medal, the one to which the Medal is awarded is far away the best; the other two, in fact, have no claim to compete with it. The building illustrated is St. David's Cathedral; the other two competitors furnish drawings of Old Shoreham Church and Stokesley Castle respectively. The drawings look as if care had been exercised in regard to correctness, but they are rather tamely executed.

The Grissel Medal is one of the few direct encouragements which are given in the Institute to purely practical architecture; in this case the subject is the design for a bridge. The prize in this case also admits of no dispute; the author of it has gone into the construction of foundations, abutments, and roadway with much more attention than is exhibited in any of the other designs, and his work is remarkable for beautiful and accurate drawing also. He adopts an elliptic arch of large span and very flat crown,—dangerously flat if the bridge were on a large scale; but he has appreciated the practical requirements in such a case by the provision of a wide central waterway. The Gothic design by another competitor, with narrow pointed arches springing from very near the water level, looks well enough, and resembles in these particulars many picturesque though inconvenient old bridges; but it would be absurd to submit such a design for a navigable river now; no one would accept it; it would be regarded as practically choking the navigation. Such a bridge now-a-days would be too truly, according to the author's motto, a "*pons asinorum*."

The Architects of the Oratory.—One of the gentlemen named as the architects of this building in our notice last week, requests us to say that the other gentleman mentioned is not associated with him in the work; but as the other gentleman, not many weeks ago, writing in the name of both, requested us to state that the building was under their joint care, we must allow them to establish their special rights in some other way. There has been a mystery about the affair from the commencement, and we are not concerned in unravelling it.

ROYAL INSTITUTE OF BRITISH ARCHITECTS: PRIZES.

At the Special General Meeting, held on the 6th March, Mr. Horace Jones, Vice-President, in the chair, before the business of the evening commenced the Chairman invited the meeting to direct the Secretaries to convey to the Patron of the Royal Institute of British Architects, her Most Gracious Majesty, a dutiful assurance of deep thankfulness that it has pleased Almighty God to preserve the Queen's life in the midst of great danger, a life deservedly dear to every British subject no less than to the Members of the Institute, and to humbly express a hope that the Queen's life may be long preserved to the benefit and happiness of her people. This having been carried by acclamation, the Hon. Secretary announced that—

Arthur John Gale, Associate, had been elected by the Council to hold the Godwin Bursary for the current year, and that he proposed to travel in America.

It was resolved that, subject to Her Majesty's gracious sanction, the Royal Gold Medal for the year 1882 be presented to Baron von Ferstel, Architect, Hon. & Corr. Member (Vienna).

The Tite Prize (Value £30).—The Secretary announced that, in consequence of the inferior character of the designs and drawings submitted this year for the Tite Prize, the Council had decided not to give the Prize. The number of competitors was four.

The Grissell Medal.—Subject: A Stone Bridge. List of Competitors: No. 1. Device: the "Pons Asinorum"; No. 2. "Imperishable"; No. 3. "Juvat impigros Deus"; No. 4. "Ad valorem"; No. 5. "Periander."

The Secretary announced that the Council had awarded the Grissell Medal to the author of the design (No. 2) bearing the motto "Imperishable"; and that the Council regretted their inability to award a Certificate of Honour to the author of the design (No. 5) bearing the motto "Periander." The name and address of the successful candidate were found to be:—H. Phelps Drew, 17, Sulgrave-road, West Kensington-park, W.

The Soane Medallion and Fifty Pounds.—Subject: A Design for a West-end Club. List of Competitors: No. 1. "El Dorado, Yo hé Trovado"; No. 2. "L"; No. 3. "Pecksniff": No. 4. "Che sarà, sarà"; No. 5. "Renaissance"; No. 6. "Pall Mall"; No. 7. "Tempus fugit"; No. 8. "Union"; No. 9. "They dreamt not of a Perishable Home who thus could Build"; No. 10. "Mediocria Firma"; No. 11. "Dispatch"; No. 12. "Gamma"; No. 13. "Work and Despair Not"; No. 14. "Monsis."

The Secretary, having read the recommendations of the Council respecting the award of the Soane Medallion and (subject to the usual conditions) £50, stated that the Committee for Medals and Prizes had specially reported thereon, and that the Report, which had been adopted by the Council, was as follows:—

Your Committee have to report that, although the number of Competitors (14) for the Soane Medallion this year is larger than usual, the practical qualities of the designs as regards the distribution of plan do not carry out the recommendations of the Council, viz.:—"That the candidates should apply themselves to the useful and practical embodiment of the specified accommodation," and in those plans where an attempt has been made to grasp the special requirements of a West-end Club, the elevations show a want of that dignity, breadth, and, it may be added, character of design, which should distinguish a building of that class. Having arrived at the decision that no one design embodied, in plan and elevation, the requirement asked for, the Committee proceeded to re-examine all the drawings, to see which of the competitors had displayed the greatest amount of thought and study on the whole design, and they arrived at the conclusion that the design marked "El Dorado, Yo hé trovado," though wanting in the character usually ascribed to a West-end Club, displayed so much thought and study and so much originality and talent in the design of the elevation, section and perspective, that they recommend its author to be the recipient of the Soane Medallion. The Committee further recommend that a Medal of Merit be accorded to the author of the design bearing the motto "Pall Mall," as having produced a carefully studied plan, and an honourable mention to the design bearing the motto "Union" for considerable merit in the perspective drawing. The Committee regret that the design bearing the motto "Dispatch" was not completed, so as to have given it a chance in the award.

Whereupon it was resolved—That the Soane Medallion and (subject to the usual conditions) £50 be awarded to the author of the design (No. 1) bearing the motto "El Dorado, Yo hé Trovado." The name and address of the successful candidate were found to be—Arthur Beresford Pite, 44, Bloomsbury-square.

Resolved—That a Medal of Merit be awarded to the author of the design (No. 6) bearing the motto "Pall Mall." The name and address of this gentleman were found to be—Leonard Stokes, 13, Holland-street, Kensington, W.

Resolved—That a Certificate of Honour be awarded to the author of the design (No. 8) bearing the motto "Union." The name and address of this gentleman were found to be—G. H. Shackle, 8, Great Marylebone-street, W.

The Institute Silver Medal and Five Guineas: Drawings.—Subject: For the best illustrations, drawn from actual measurement, of any important building — Classical or Mediæval — hitherto unpublished in that manner. List of Competitors:—No. 1. "Spes"; No. 2. "Grosvenor"; No. 3. Device of a Leaf.

Resolved—That the Silver Medal of the Institute and Five Guineas (Drawings) be awarded to the author of the drawings (No. 2) bearing the motto "Grosvenor." The name and address of the successful candidate were found to be—Thomas T. Scott, 14, Bank-street, Carlisle.

Resolved—That a Certificate of Honour be awarded to the author of the drawings (No. 3) bearing the device of a leaf. The name and address of the successful candidate were found to be—R. Elsey Smith, Laurel Bank, Forest Hill.

With reference to this award it was subsequently resolved—That, in future, the sum of Ten Guineas (instead of five guineas) be annually given with the Institute Silver Medal for measured drawings, and that, in the present instance, an extra sum of five guineas be presented to the successful candidate, Mr. Thomas T. Scott.

The Institute Silver Medal and Ten Guineas; Essays.—Subject: The stall-work, canopies, and rood-screens of the fifteenth century (English only). No. 1. "Perspicuity."

Resolved—That the Silver Medal of the Institute and Ten Guineas (Essays) be not awarded this year, and that the same subject be given next year.

PROPOSED AMENDMENT OF THE METROPOLITAN BUILDING ACT.

CUBICAL CONTENTS OF WAREHOUSES.

At the meeting of the Metropolitan Board of Works on the 3rd inst., the following report was presented by the Building Act Committee:—

"Your committee have to report that they have considered the letter from Mr. R. D. Dalby, chairman of the Fire Offices Committee, expressing a hope that the Board will consent to withdraw the 19th Clause in the Metropolis Management, Building, and Floods Prevention Acts (Amendment) Bill, referred by the Board on the 27th of January last. This clause gives the Board power in certain cases to authorise the construction of warehouses or other buildings used for the purposes of trade and manufacture, containing more than 216,000 cubic feet, without divisions by party-walls. The Fire Offices Committee have submitted to your committee, who were authorised by the Board to confer with a deputation from that body, that any increase in the cubical contents of buildings of this description would be fraught with great danger to the public, and would increase the expense of fire extinction in the metropolis. Your committee, having fully considered the representations made to them, are of opinion that the clause in question should not be proceeded with, and they therefore recommend that the Solicitor be instructed at the proper stage to take measures for the withdrawal of the clause from the Bill."

Mr. Deputy Saunders, Chairman of the Committee, moved the adoption of the report.

Mr. Richardson thought the Board should decline to withdraw the clause in question. If they were beaten in Parliament, they could then withdraw; but after the attention and consideration that had been given to the subject, the Board ought not to give way at the first sign of opposition.

It was pointed out by several members, however, that the retention of this clause might imperil the passing of the other portions of the Bill; and Mr. Freeman said he was afraid that this was one of the cases where they must stoop to conquer.

The motion was carried.

The National Standard Land Mortgage and Investment Company (Limited) notify that they have declared an interim dividend at the rate of 5 per cent. per annum.

CONTINENTAL GATHERINGS.

WHAT in Paris has long been a hotly-discussed point, has at length been decided,—the remains of the Palace of the Tuileries are to be removed. What portions of the ruins can be preserved will, of course, be respected: a specially-appointed commission is at present considering the question. Many of the fragments will doubtless be used as suggestive decorations in the gardens, while the architectural details of more artistic merit will be removed to one of the State museums. Experts fear that, what with the fire and the ten years' subsequent exposure to the weather, the stone will be in a sad state of crumble; indeed, an idea of the probable eventual appearance of our Houses of Parliament may be obtained by an inspection of some of the portions of the now doomed Tuileries. Since the terrible night when the great clock stopped, its hands staring ever since that memorable 23rd of May at ten minutes past nine, the ruins of the once brilliant palace have been open to wind and rain; the sparrows flit about the golden walls and perch on the twisted sconces of the *Salle des Maréchaux*; the shutters are torn from their hinges; the red and black splintered stone crumbles slowly away: the whole has the disconsolate appearance with which we are all familiar of a house that has been burnt clean out. Of Catherine de Medici's palace, what little was left by the restorers is now gone; the central pavilion, which is the least injured, is, by good luck, perhaps, the only existing portion of the original plan of Philibert de l'Orme, to whose work successive generations have added on what had come to be known as the Tuileries. Now, however, the whole will disappear, and few will regret that so sad a reminder of the terrible reign of the Commune as the ruins now preserved in the midst of re-built Paris and its gaiety will thus be removed, to leave only the recollection of the fame of a palace which, strange to say, till within a century has been little occupied by French royalty.

From the lagoons comes a disagreeable intimation. The Church of Sta. Maria della Misericordia, long sadly desecrated, is threatened with demolition. A lengthy lawsuit respecting the ownership of the church, lying between the Government and the Moro family, has been settled in favour of the latter. They have immediately, it is stated, offered the whole for sale, with its interesting objects of art, not least curious among which are many tombs of the ancestors of the family, the same to which is attached the Venetian legend handed down to us so incorrectly in "The Moor of Venice." The church having been commenced by the united families of Giulij and Moro somewhere about the middle of the tenth century, there have naturally been great alterations. The seventeenth century laid heavily its hand on the old church, in the shape of a façade; but into so sad a state had the old building fallen that about sixty years ago the restorers had to be called in. Damp and neglect had worked their usual havoc, a few pictures still remained, one by Cima, a number by Bonifazio; there was also the tomb of the fourteenth-century Captain Jacopo Moro, the work of Bartolommeo Bono, the artist of the beautiful series of capitals of the columns in the arcade of the Ducal Palace. Some thirty years since, the church and its various curiosities were set in order and preserved from further injury. The whole has now been sold by the owners, and who can say how far the mercenary zeal of the dealer may go? It is urged that the law, in the interests of art and of Venice, should decide what objects belong to the family and what to the nation. It is a difficult question; the Venetian aristocracy, with their centuries of pedigree, are poor, and the antique code of honour and pride has sadly relaxed in these degenerate days. Our contemporary *L'Art*, in its issue of January 15th last, gave a sketch of the church, accompanying a letter from the Count Zarzi, of the Museo Correr, and whose name will be remembered as having been foremost in the outcry against the proposed restoration of St. Mark's.

When is Italy to cease to supply us with its envied artistic treasures? Two sales are announced to take place in a few weeks at Gubbio, in one case the collection of the Marchese Ranghiasci-Biancaleoni; pictures, statues, majolica, arms, jewelry, stuffs, &c., all the choicest products of the Italian art industry of the past. As a supplement another nobleman of the same town has announced his intention to relieve himself at the same time of his family pictures.

Recent ministerial changes in France have retarded many excellently-commenced plans. None surely was of greater promise than the creation of a special school for the formation of museum officials, the school to be placed under the charge of the Director of the Louvre Museum. From heads of departments down to the attendants the candidates are to receive a course of instruction to fit them for their posts. Here, we think, is certainly an excellent idea, one worthy of consideration. Our Museum authorities learn their duties only after long years of experience, but this very experience would constitute them excellent framers of a mode of education by which much saving of time might be effected, and a more thorough system adopted from the heads down to the underlings, who, educated in their special duties, would constitute a far more effective staff than when simply serving mechanically under superior direction. The duties of the modern museum official have assumed a far more defined and responsible character than is generally supposed.

We learn also that a commission has been appointed by the French Government to inquire into the hygienic condition of the various schools throughout the country, an inquiry which cannot fail to effect many excellent and sorely-needed reforms. One member of the commission is to report his personal experience of the inspection of the schools in other countries.

Another measure of hygienic precaution recently adopted in Paris is deserving of mention. The "Administration de l'Assistance publique" has built and set in circulation in the neighbourhood of the hospitals a number, as yet only very small, of cabs specially intended for the transport of the wounded, and of patients suffering from contagious diseases. These cabs, which can be warmed in winter, have, of course, been built with a view to being easily disinfected. In course of time each vestry-hall of Paris will be provided with one or more of these cabs.

PRACTICAL REMARKS ON THE SEASONING OF WOOD.

THERE have been promulgated from time to time so many different theories concerning the best way of seasoning wood, that, whilst taking the subject once more in hand, we feel that we are not only approaching debateable ground, but that we are stepping on to that which has been already well-nigh exhausted by writers.

Let us commence this paper by remarking that wood is an elastic material; that it expands under the influence of moisture; and that it contracts again when, by the process of drying known as "seasoning," the moisture has been evaporated from it. A thin coating of paint or other material, when applied to seasoned wood, may be the means of keeping out moisture, and, of course, if it be kept out, the wood will not be in any way affected by it; but if the moisture be permitted to approach dried wood the sponge-like character of the material will absorb it, and it will expand in proportion to the amount of moisture that has been absorbed.

We have remarked that a coating of paint or other similar material will, when applied to wood, exclude moisture, and we may further remark that, by the action of the evaporation of the natural juices of wood, it would appear a sort of fine skin is given to wood, which skin is sufficient, frequently of itself, to exclude moisture. We will furnish an example of this fact by detailing a case which came under our own observation. The flooring-boards of an old floor in a dwelling-house were taken up for the purpose of being re-planed. They had been laid down considerably over twenty years. Before being taken up the joints were seen to be quite close-fitting. After having been planed over the boards were relaid, and with the result that in about two months all the joints had considerably opened, and it was found to be necessary to again take up the boards and relay them, so as to secure close-fitting joints. It was the fact that by the removal of the old skin evaporation had re-commenced, so the wood had undergone a second process of shrinking.

Wood requires time in which to season, very much in proportion to the density of its fibre. But this rule is not without an exception, for pitch pine, which is not at all a densely-fibred wood, requires a long time in which to season even when the process is conducted under favourable conditions.

This occurs probably in consequence of the resinous character of pitch pine, the resin clogging the pores of the wood, and thus stopping up the channels through which the moisture would otherwise exude. There are some woods,—and mahogany, ebony, and some other of the tropical woods are of the number,—that, even in their living state, contain very little moisture.

Plants that are of slow growth contain less moisture when in a living state than do those whose growths are rapid. A mahogany tree requires 500 years in which to mature, and, as a consequence, its texture is exceedingly dense. Being dense in texture, it requires a long time to properly season, and during that lengthened period it shrinks very little. Mahogany should not be kept longer than necessary in the log, because insomuch as the outside portion of a log contains the greatest amount of moisture, and it being the exposed part, it will, as the wood dries, shrink more than the inner wood, and so, to allow for the outside shrinking, outside shakes will and must occur.

The same remark applies with equal force to all log timber, but we name the circumstance in connexion with mahogany particularly for the reason that it is a general practice with some to keep mahogany logs in their unsawn state, under the misapprehension that the logs do not deteriorate. When it is required to keep the logs in comparative bulk, it will be found to be a convenient method to have one cut put down the centre of them, which, as a rule, will be sufficient to obviate any tendency to outside shake that may arise in consequence of their shrinking on the outside. When cut, mahogany boards should always be laid aside to season in the same order as they have left the saw. Strips of accurately sawn wood should be placed at intervals of a not greater distance than 12 in. from each other, and we are inclined to advise that the strips of wood be placed even closer together than that.

It is advisable that some woods should be seasoned quickly, and that others should dry slowly. Mahogany must be seasoned slowly. To season it thoroughly and well, periods should be allowed in something like conformity with the following table. Care should also be taken that the strips of wood which separate each board should have their positions changed at least once in each year, and the whole of the boards should have their sides reversed once in each year, so that the sides of the boards which were below should, by being reversed, be placed upwards, and *vice versâ*. The remarks made concerning the seasoning of mahogany boards may be taken to apply also to wainscot oak boards.

Table apportioning the Time to be allowed for Seasoning Mahogany and Wainscot Oak Boards under favourable Conditions.

Thickness of Boards.	Time to be allowed for seasoning in the open.
¼ inch	12 months
½ "	12 "
¾ "	16 "
1 "	20 "
1 "	24 "
1¼ "	30 "
1½ "	33 "
2 "	36 "
3 "	46 "
4 "	56 "

It is, perhaps, superfluous to add that some kind of improvised roof must be provided under which to shelter the seasoning board from the damaging effects of the sun, the rain, and dirt. It is the practice with some to preserve the ends of mahogany boards, when they are undergoing the process of seasoning, by nailing a strip of wood on the end of each board. Of this practice we do not altogether approve, for the reason that it retards, to some extent, evaporation. A roof which sufficiently overhangs the ends of the boards is a complete preventive, and is more advisable.

Newly-felled pine timber contains about 39 per cent. of moisture. The specific gravity of pine is (to water = 1·000) 0·9121. It can be air-dried to 0·5502, and artificially dried to 0·4200. The specific gravity of fir is 0·8700. It can be air-dried to 0·4700, and artificially dried to 0·3800.

Insomuch as pine-deals reach this country in a narrow range of length, they can be placed in a position for drying which they would not well occupy if the range of lengths was longer. It is the practice with many joiners to "perch" their pine boards to season; but we are opposed

to the practice of placing the boards in any position where they become dirty, and impregnated with smoke, dirt, and grit. We hold that the object to be attained in the seasoning of wood is to slowly evaporate the moisture which is in the wood, without permitting the wood to lose its sawn shape, and at the same time to keep it perfectly clean.

It is here worth while penning a few notes relative to the importance attached to keeping wood clean, because the matter is one which is, now-a-days, receiving considerable attention. It is only of late that steamships have been largely employed to bring over foreign sawn timber. Shortly after the introduction of steamships into the wood-carrying trade, timber importers had the advantages which these vessels afford over sailing ships made clearly manifest to them by the preference which consumers of wood showed for the excellent condition in which the wood brought over in steamships reached them. The quick passages made by steamers afforded no time for any kind of fermentation of the sap to ensue, and there being no sea-washed deck-cargo to spoil the general appearance of a parcel, the preference for clean-looking stock began to direct the attention of consumers to the advantage of keeping seasoned wood also clean. There is no greater mistake made than to suppose, as some do, that the bulk of wood in a timber-merchant's yard necessarily improves with time. Timber importers learn to their cost that, instead of improving, it deteriorates very quickly indeed; and one of the questions which many timber importers have set themselves to consider is, whether it is not advisable for them to incur the cost of erecting large sheds under which they can store their better quality deals, and thus keep them clean.

Pine boards should be seasoned on very much the same plan as that which we have recommended for the seasoning of mahogany boards. We suggest only this alteration, that they should be placed where the wind can reach them, for they should be dried quietly. The reason for this is that pine is a wood which is prone to rapid decay, and therefore the quicker it can be placed in an absolutely dry position,—such, for instance, as being made up into internal joinery work,—the better.

Redwood is a difficult timber to season properly. The lack of uniformity in the lengths of redwood deals renders the adoption of the same plan as that which we have suggested for the seasoning of pine boards inconvenient, because insomuch as the long boards would hang over the others the leverage would be certain to cause the boards to bend. Perhaps the best way is to place them on their edges in a frame although in this situation they would be likely to twist somewhat. The general practice is to "perch" them, but if they be at all "shelly," and "shelliness" is a fault usually attached to the finer kinds of redwood,—such as Archangel and Onega redwood, the rain is apt to penetrate into the "shelly" parts of the boards, and should frost succeed the rain it splits and rives open the boards terribly. It would thus appear to be imperative that redwood should be seasoned under cover. Wind is a useful agent to assist in the drying of redwood.

Baltic whitewood, of all classes, seasons quickly, and as the wood rapidly deteriorates under the action of the rain, the sun, and frost, the quicker it is dried the better.

Whitewood cannot be satisfactorily dried by artificial means, for it twists under the action of heat. Whitewood hardens very much by being exposed to the weather. The reason of this is that from its sponge-like texture the pores of the wood rapidly close when evaporation ensues.

We can recognise no advantage in incurring the expense of seasoning hearing woods. Of course, if the wood is positively wet, it must be dried of the superfluous moisture, but that may be considered to be sufficient. Flooring-boards are best seasoned by being "perched" in an elevated position, where the wind can freely circulate through them, and cause them to rapidly dry. The ends of the boards should be well lifted out of the damp earth. Perches of different heights should be erected, so that the long boards can be dried upon a high perch, and thus they are prevented from bending sufficiently as to cause them to dry in a twisted form. For the sake of preserving the face sides of the boards clean, it is a good plan to "perch" the boards in pairs by placing two boards with their face sides together. They will dry perfectly well when so placed, and no little advantage is secured by having the boards turn out clean on the face side, for in a number of cases it will be found unnecessary to re-plane them when laid. We have commented in the commencing portion of this paper upon the danger of flooring-boards undergoing a second shrinking process on the removal of the dried faces of the boards.

It may here be remarked, and the comment is well worthy of the attention of architects, that the shrinking of flooring boards when laid is oftener to be accounted for by the fact that after the floor has been laid the boards have been replaned up so as to give a clean new-looking surface, than for the reason that the boards have been insufficiently dried.

The practice of drying the boards with their face sides together secures, as we have remarked, clean faces, and thus avoids the necessity of having the boards replaned after they have been laid, and as a consequence reduces their liability to shrink.

We have indulged in repetition on this point for the purpose of giving emphasis to our views, regarding them as being of some importance.

The system of stacking flooring-boards to dry in triangular fashion is much to be condemned for several sufficient reasons. The first is that, when so piled, boards will hold no inconsiderable quantity of snow or rain water.

The second is that they do not dry in those places where the boards must necessarily touch each other in the crossing.

The third reason is that when the boards are in long lengths they have a natural tendency to "swag" in their centres, and so to dry in a twisted or crooked form.

It is to be borne in mind that, although wood the grain of which is of a twisted character has a natural tendency to dry crooked, yet that it can, by being judiciously weighted, be kept straight.

This fact, however, suggests to us that even straight-grained wood will dry in a crooked form if, when left to season, it be allowed to assume a bent form, and that this being so it is imperative that the piling of wood into position for seasoning should be directed by care and intelligence.

H. S.

PROPOSED WORKHOUSE EXTENSION, ST. PANCRAS.

COMPETITIVE PLANS.

THE drawings submitted in this competition, limited to five firms of architects, viz., Mr. H. H. Bridgman, Mr. Elijah Hoole, Messrs. John Saville & Son, Messrs. Wilson, Son, & Aldwinckle, and Messrs. Young & Hall, have been on view during the week in the Vestry-hall, Pancras-road. The requirement of the Guardians was the reconstruction or partial reconstruction of the present workhouse, with the view of providing accommodation therein for 2,000 inmates. Only six weeks have been allowed to the competitors for the preparation of the designs. The Board of Guardians and the Local Government Board have been for some time at issue as to the possibility of providing the required accommodation on the existing site. The Guardians contend that this can be done, but, as a concession to the view of the Local Government Board, they instructed the competitors to prepare alternative plans, one showing how the present site could be made to provide the required accommodation, and the other showing what could be done with the site of Cook's-terrace thrown in. The present workhouse, which was commenced in the year 1809, should really only accommodate 1,400 inmates, but it at present, we are told, is so overcrowded that it contains 1,900. It is understood that the author whose design is selected will be chosen to carry out the work, the other competitors being paid an *honorarium* of 75*l.* each. In the event of the design placed first not being carried out from any cause, such as the disapproval of the Local Government Board, the Guardians reserve to themselves the right of discharging the architect on the payment to him of 300*l.* It seems that no professional referee is to be appointed to advise the Guardians in making the selection. If not too late, we would strongly urge the Guardians, for the sake of their constituents, the ratepayers of the parish (if not out of consideration for the competitors), to take independent professional advice before coming to a decision. The attainment of efficiency, combined with economy, should be the aim of the Guardians; but it is hardly to be expected that they can, unaided, pass an accurate judgment as to the comparative merits of the designs in these respects

We append a few notes as to the designs submitted, taking the competitors in alphabetical order. The motto system has in this competition been discarded, each competitor putting his name upon his drawings and the report accompanying them.

Mr. H. H. Bridgman.—Scheme A provides accommodation for 2,033 inmates, while scheme B shows additional area added to the site by taking in the ground upon which Cook's-terrace now stands, and provides for 1,937 inmates. Scheme A would, if carried out, necessitate the removal of the whole of the blocks abutting on the St. Pancras burying-ground. It also necessitates the removal of the main block of the present building, and of the relieving-wards and other buildings. The cost of this scheme the author estimates at 69,262*l.* The alternative scheme (B), by reason of the acquisition of the site of Cook's-terrace, involves the demolition of fewer of the existing buildings than would be necessary for the carrying out of scheme A. The cost of this alternative scheme (B) is estimated by the author at 54,475*l.* The design of the buildings under scheme A is "Free Classic" in character, while the buildings proposed to be erected under scheme B are proposed to be of Gothic character.

Mr. Hoole.—By Scheme A, Mr. Hoole provides accommodation on the existing site for 2,000 inmates, but demolishes fewer of the existing buildings than is contemplated by any of the other schemes. The new buildings are proposed to have floors and flat roofs, all of fireproof construction (rolled iron joists and concrete). The scheme also includes the erection of an additional story on the walls of the existing main building, by lifting the roof and interposing between it and the top of the present walls a framework of iron, filled in with double panels or slabs of concrete, having air-spaces between. This method of constructing the additional story is adopted for the sake of lightness. The extra story thus gained is to be used for dayrooms and workrooms. The cost of this scheme, including fencing, lighting, and draining, is put at 84,225*l.* Scheme B proposes to demolish only four small dilapidated blocks from among the existing buildings, the remaining blocks of the existing buildings being simply rearranged with regard to furniture and inmates. Two new blocks of considerable size are, however, to be provided on the Cook's-terrace site, accommodating about 800 inmates altogether. The cost of this alternative scheme, including paving, fencing, lighting, and draining, is estimated at 75,685*l.*

Messrs. John Saville & Son.—In scheme A these competitors retain the existing main block, kitchen and offices, dining-hall, lying-in wards, the infirmary, and a few other blocks. They also propose to raise an additional story on the existing main building. With regard to the Cook's-terrace site they believe that if it is used at all the whole of it should be used. They propose to erect on it (scheme B) three blocks four stories high, accommodating about 600 inmates. Floors of rolled iron joists and concrete are proposed to be used in the new buildings. The designs are of a domestic Gothic type. The authors estimate the cost of carrying out scheme A to be 90,000*l.*, the cost of executing scheme B being set down at 73,000*l.* Scheme A provides accommodation for 2,250 inmates, and scheme B for 2,050.

Messrs. Wilson, Son, & Aldwinckle, submit three designs, A1, A2, and B. The design marked A1 proposes to retain and improve the present main building, also the present dining-halls, kitchen, stores, &c. It also proposes the erection of a new laundry, general stores, workshops, and engine and boiler house in the rear of the present main building, and to extend the dining-halls eastward, and to build a chapel adjoining the latter. These, together with the existing halls and kitchen, constitute the new administrative block. On the north and south of this new administrative block, and to the east of the main building, will be erected six blocks or pavilions for inmates, all with their axes north and south. This scheme provides accommodation for 2,005 inmates, at an estimated cost of 66,000*l.* Scheme A2 differs mainly from A1 in that the old main building will be taken down, retaining all the other old buildings retained by the former scheme, with the addition of the lying-in and infants' wards building, which it is proposed to convert into a male infirmary, with wards for imbeciles on the ground floor. This scheme

provides accommodation for 2,016 inmates, at an estimated cost of 78,000*l*. Scheme B proposes to retain the present main building, the dining-halls, the kitchen department, the lying-in and infants' ward building, the old infirmary building, and the relief offices. The new buildings proposed to be erected on the present site under this scheme will comprise two pavilion blocks, one for able-bodied and one for sick and imbecile inmates; also new school houses, isolation and receiving wards, &c., similar to those provided in scheme A1. New buildings, four stories in height, to contain bedridden wards, will be erected along the whole length of Cook's-terrace. This scheme provides accommodation for 2,049 inmates, at an estimated cost of 58,500*l*.

Messrs. Young & Hall.—Design A submitted by this firm proposes to give the required accommodation by clearing the existing site of all buildings except the kitchen and dining-hall block. With the exception of these buildings, this design consists of an entirely new arrangement of buildings, on the pavilion principle, with administrative block facing to King's-road. The cost of carrying out this design is estimated at 104,544*l*. The floors throughout are proposed to be of rolled iron joists and concrete. Design B submitted by these competitors retains the following existing buildings, viz., the main front block, the lying-in block, the infirmary, and the kitchen and dining-hall block. The authors propose to utilise the whole of Cook's-terrace, building accommodation thereon, in one block, for 780 inmates. The new buildings on the existing site under this scheme are arranged, as far as possible, on the pavilion principle. The total cost of this alternative design is estimated by the authors at 86,962*l*. The buildings are plain and unpretending in style, but the planning appears to have been very carefully studied.

Since the foregoing was in type we learn that at an adjourned extraordinary meeting of the Guardians, held on Thursday morning, a letter was read from Mr. Bridgman, one of the competitors, suggesting that an architect of reputation should be called in by the Guardians to report upon the several schemes before any decision was come to. A letter was also received from Mr. E. J. Physick, sculptor, of Marylebone-road, forwarding his reasons in favour of the selection of the plans sent in by Messrs. Saville & Sons.

On the motion of Mr. Bolton, one of the Guardians, it was resolved, by 7 votes to 6:—

"That, having regard to the sufficiency of the present site for efficient workhouse accommodation, clearly demonstrated by the reports and plans of all the competing architects; and having regard to the fact that it will be by far the least expensive course to provide workhouse accommodation on the present site alone, the design and plan to be selected shall be one of those providing for workhouse accommodation on the present site."

A deputation from the Vestry of St. Pancras attended to present a resolution adopted by a committee of the Vestry, expressing the opinion that the most efficient and economical schemes submitted by the competitors for the reconstruction of the workhouse were, in every case, the schemes marked "A."

It was moved by Mr. Drew, and seconded:—

"That the further consideration of the subject be referred to the Workhouse Accommodation Committee, with authority to consult an architect as to the merits of the different plans relating to Scheme A,—whether the instructions of the Board and the requirements of the Local Government Board have been complied with; whether the necessary workhouse accommodation can, as it appears by the plans, be provided on the present site of the workhouse; and whether the same can be provided at the price estimated."

This motion was lost, 5 voting for it and 6 against.

It having been resolved that the Board should at once proceed to select a design and adopt an architect, the Board adjourned to the Vestry-hall to examine the designs. On their return, it was resolved, on the motion of Mr. Skoines:—"That the five architects be reduced to two." A show of hands was then taken for each of the competitors, and the result was as follows:—

Bridgman	3 votes.
Hoole	2 "
Saville & Son	6 "
Wilson, Son, & Aldwinckle	8 "
Young & Hall	1 "

It was then resolved, on the motion of Mr. Skoines:—"That the names of Messrs. Wilson, Son, & Aldwinckle, and Messrs. Saville & Son, having the highest number of votes, be again put to a show of hands." This was accordingly done, and the result was:—

Wilson, Son, & Aldwinckle	7 votes.
Saville & Son	4 "

It was finally resolved:—"That the Scheme A No. 1 of Messrs. Wilson, Son, & Aldwinckle be accepted and sent to the Local Government Board for approval, and that the architects be requested to put themselves into communication with the Local Government Board."

THE INTERNAL DECORATIONS OF THE ROYAL AVENUE THEATRE.

THE Royal Avenue Theatre must have been noticed by most of our readers. It is situated at the end of Northumberland-avenue, and has an odd aspect from being plastered against the end of the railway bridge in swallow-nest fashion. The architect is Mr. F. Fowler, of the Metropolitan Board of Works (Fowler & Hill), and the building has been erected by Messrs. Kirk & Randall for a gentleman whose mission appears to be to build theatres and sell them,—Mr. Sefton Parry.

Within, the accommodation is more considerable than would be supposed outside. It will seat 1,200 persons, we are told. To what extent the performances will be interfered with by the passing trains we cannot yet say. The dressing-rooms, we are sorry to hear, are under the auditorium, a deep basement having been formed.

Our present purpose is with the internal decorations, which have been executed by Mr. Boekbinder and some other foreigners, and are certainly more artistic than most of the theatrical work we have seen lately. The embellishments *in relievo* are wholly of *carton pierre*, that is to say, the background is so as well as the raised ornamentation thereon, no plaster being used. The ceiling of the auditorium, which is circular, is divided into compartments, radiating from the central chandelier by figures with expanded wings, holding in one hand a palm branch which passes through a wreath of laurels in the other hand, crowning a portrait of a dramatic author, of which there are twelve, namely, Shakespeare, Beaumarchais, Van Voudel, Congreve, Calderon, Corneille, Goethe, Racine, Goldsmith, Schiller, Sheridan, and Molière. These portraits are artistically executed by Mr. Henri Verbuecken, of Antwerp. Beneath the ceiling is a cove, on which are highly enriched panels, adorned with paintings in *camaïeu* of *mascarons* of the Nine Muses and Apollo. The cove forms at its extremities two spandrels, well modelled with trophies of musical instruments. The proscenium itself has a ceiling of seven panels taking the shape of an arch, crowning the elevation of the stage-boxes, the topmost of which on each side is surmounted by a *fronton*, on which are seated figures of children holding a medallion between them. On each side of these boxes are two well-modelled Caryatides, holding vases from which spring lights supported by four consoles of Tragedy, Comedy, Drama, and Burlesque. The two figures over the centre of the stage symbolise Music and Song, and support the royal arms. The ornamentation of the boxes, balcony, and amphitheatre is artistic, and does credit to Mr. Boekbinder. The prevailing tone is ivory and gold.

ART AT NEWTON ABBOT.

IN connexion with the Newton Abbot School of Science and Art, an Art Exhibition will be opened in the Alexandra Hall on Wednesday, April 12. Mr. Norman Shaw, R.A., and Mr. J. C. Horsley, R.A., are the judges. A special feature of the Exhibition will be tile decoration in *sgraffito*. This style of pottery ornamentation has been in vogue in Devonshire for some hundreds of years. It has recently been resuscitated on general pottery in North Devon, and now by the Newton Art School on tiles; its effects for strings and panels will be seen at the Exhibition. This style of work appears to be susceptible of wide adaptation.

There are numerous prizes for painting on tiles, and several chased silver badges are offered, chiefly for amateur work. Amongst the donors of these special prizes are the Duke of Somerset (Lord-lieutenant of Devonshire), and the Earl of Devon.

Mr. Horsley will deliver an address to art students on the occasion of the opening of the Exhibition.

A similar Exhibition, held in the town last year, appears to have been very successful.

THE RATHHAUS AT AIX-LA-CHAPELLE.

BULB-SHAPED SPIRES.

THE Rathhaus at Aix-la-Chapelle is a building of various dates, which is said to occupy the site of the ancient palace of the German Emperors. The main body of the edifice is oblong in form; the side fronting the market-place forms a façade two stories high, pierced with large square-mullioned windows, the spaces between which are adorned with panelling and canopied niches. The date given to this part of the building is 1353, but it certainly looks considerably later. Attached to either end of the Rathhaus are dissimilar towers of very rough rude masonry, and evidently of considerable antiquity; their lower portions are, without doubt, Romanesque work, and they certainly formed a portion of the old castle of the German Emperors. How these towers were originally terminated it is now impossible to say; at present they support two of the most singular examples of the "bulb-shaped spire" to be seen in Germany. However much architects may find fault with these curious structures, they are remarkably picturesque, and the charming contrast of colour offered by the grey slates covering the upright portions of these steeples and the green of the copper with which the bulbs are coated, makes them very attractive objects to the painter. As will be seen from our engraving, although at first sight the two spires seem to be of the same design, yet they are found to be totally different when more carefully examined.

No satisfactory explanation seems yet to have been given of the origin of these bulb-shaped spires or steeples. Nor is it quite clear whether they first appeared in Holland or in Germany. They seem to have found more favour in the north than in the south of Europe, for while they are seen in abundance in Holland, Belgium, Germany, the north of France, and examples are not unfrequent in Norway, Sweden, and Denmark, yet they are not common in Italy, Spain, Portugal, or the south of France. It is said that the spire of the lantern at Antwerp Cathedral is the earliest existing construction of this kind. Whether there is any authority for this statement we know not. It has been also suggested that the Dutch invented this kind of steeple during their great tulip rage and that the bulb of the tulip suggested the form of these spires. This certainly seems improbable.

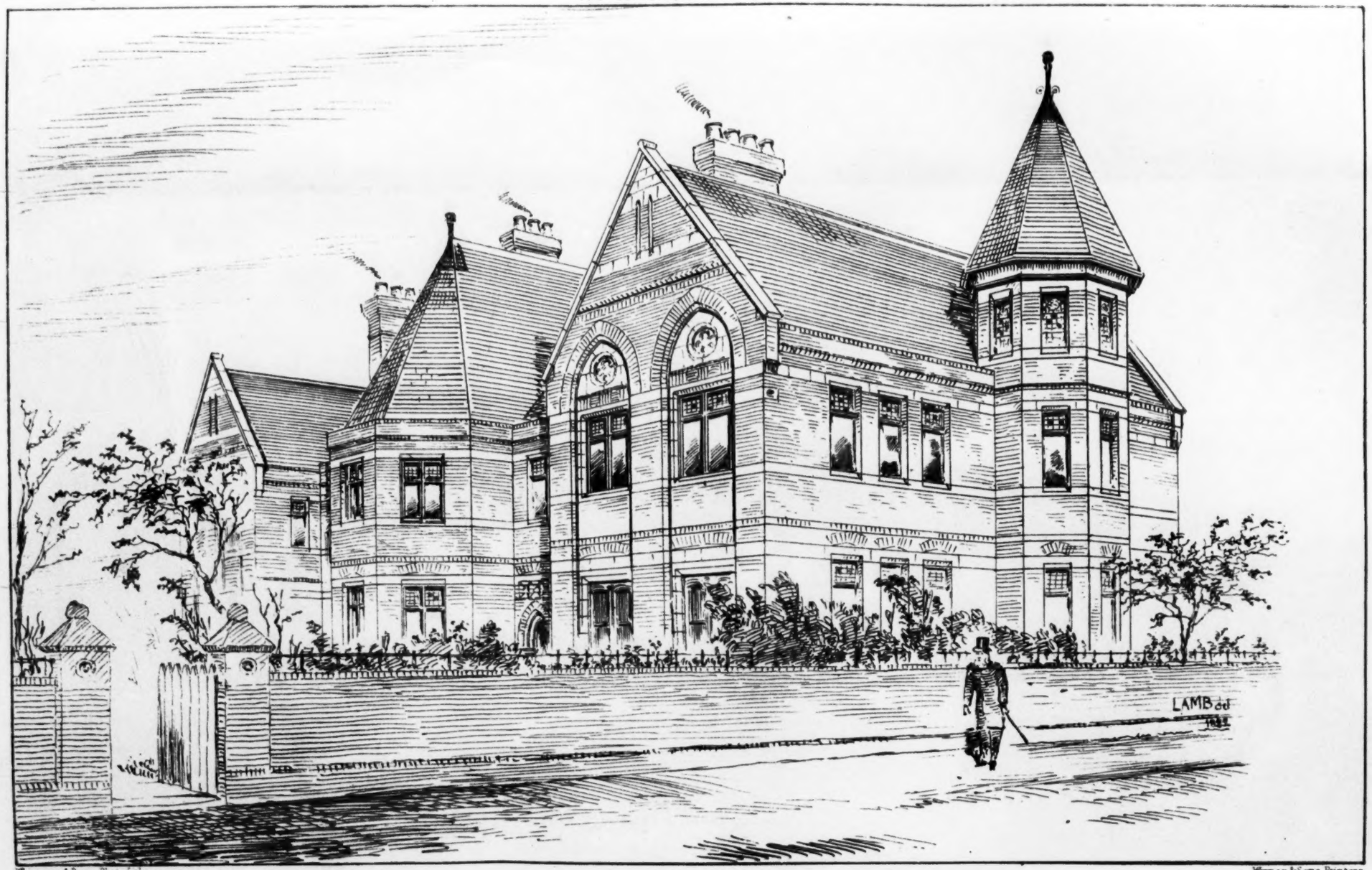
If this form of spire were common in Portugal we should at once have said that its origin was undoubtedly Indian, and that its form was copied from the Indian temples; but it does not appear to have found favour in the eyes of the Portuguese.

Another theory is that it invaded Europe from the East by way of Russia, Hungary, Bohemia, &c. This is possible, but as far as we know, the examples of this form of spire to be found in Hungary, Bohemia, &c., are all very late; we doubt whether any of them are anterior to the year 1600. Nor are they so developed or anything like so picturesque as the Dutch examples.

An inclination towards the bulb form may be noticed in the lanterns over the domes of St. Mark's, Venice, and perhaps this may suggest another origin for the bulb-shaped spire. Although the metal coverings to the dome of St. Mark's date only from about the fifteenth century, in all probability they were reproductions of the old Byzantine works, and it is therefore possible that the bulb-shaped spire may be a kind of Byzantine revival at the close of the Middle Ages. We have frequently alluded to the curious attempt which appears to have been made in Germany to revive the *Romanesque* at the close of the fifteenth and in the sixteenth century, and this may have been the result of an attempt to revive the Byzantine. The bulb-shaped spire never seems to have been popular in England, and but few examples are to be seen in this country.

Value of a Town-hall.—It is authoritatively stated that the Kensington Vestry have received for the current year, with some weeks unexpired, the sum of 1,800*l*. for the letting of the hall and rooms.

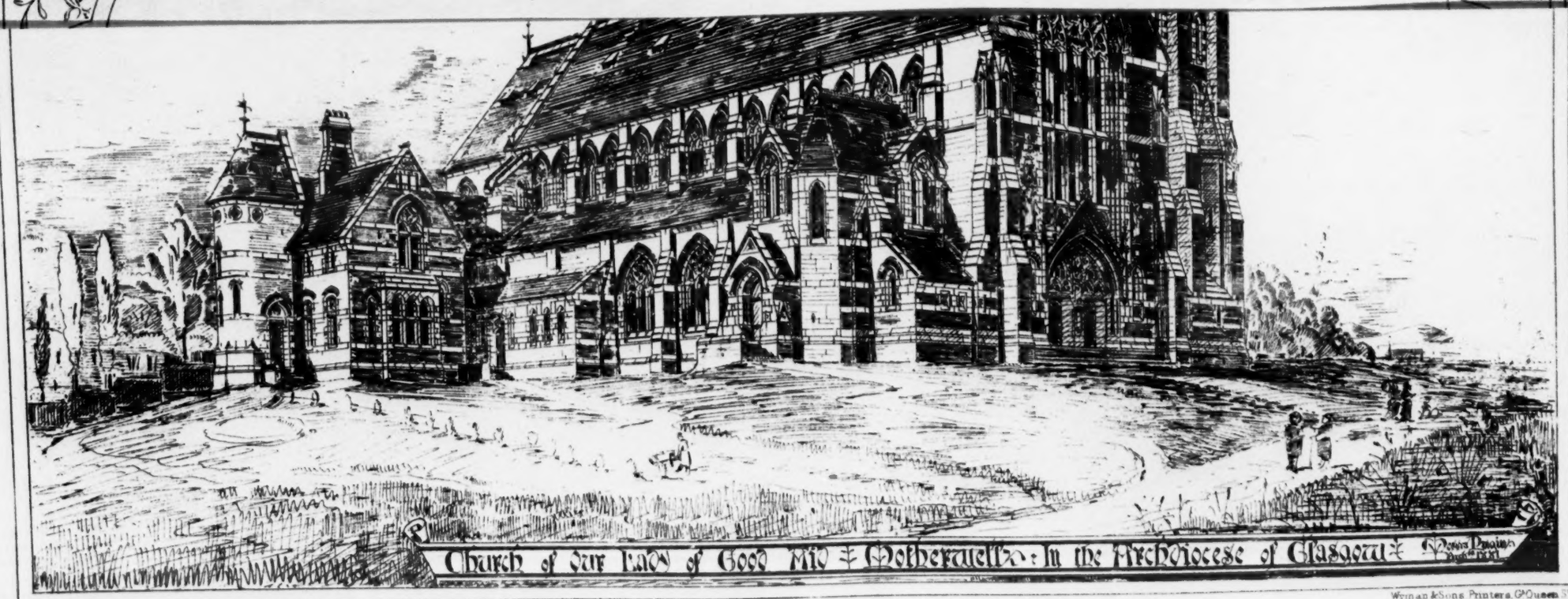
THE RATHHAUS AT AIX-LA-CHAPELLE: BULB-SHAPED SPIRES.



Whiteman & Bass. Photo-Litho

Wyman & Sons, Printers.

PRIVATE SCHOOL, NEAR LANCASTER, FOR THE REV. W. BURTON.—MR. JAS. A. BURTON, ARCHITECT.

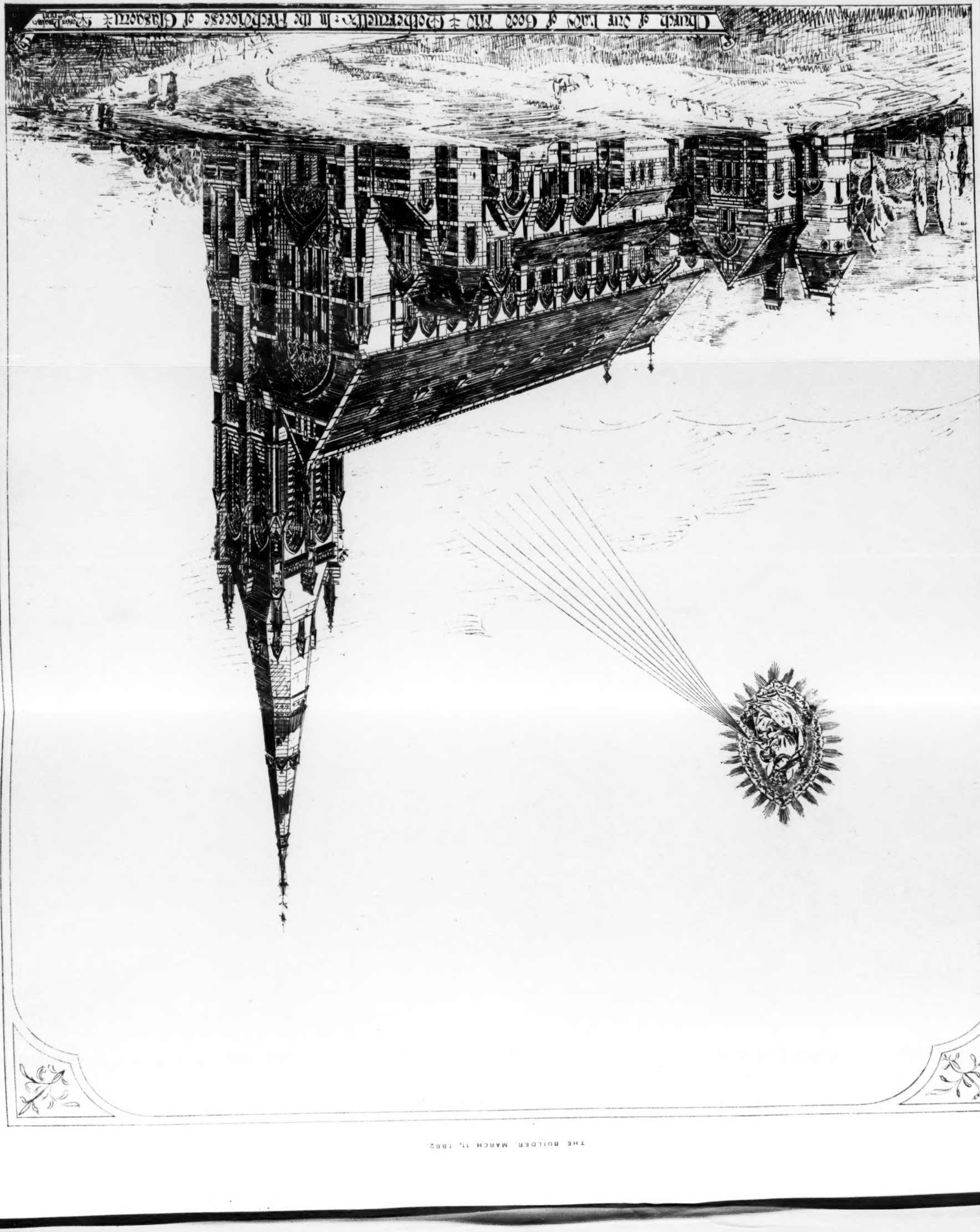


Whiteman & Bass *Photo-Litho* 236 High Holborn

Wyman & Sons Printers, G^t Queen S^t

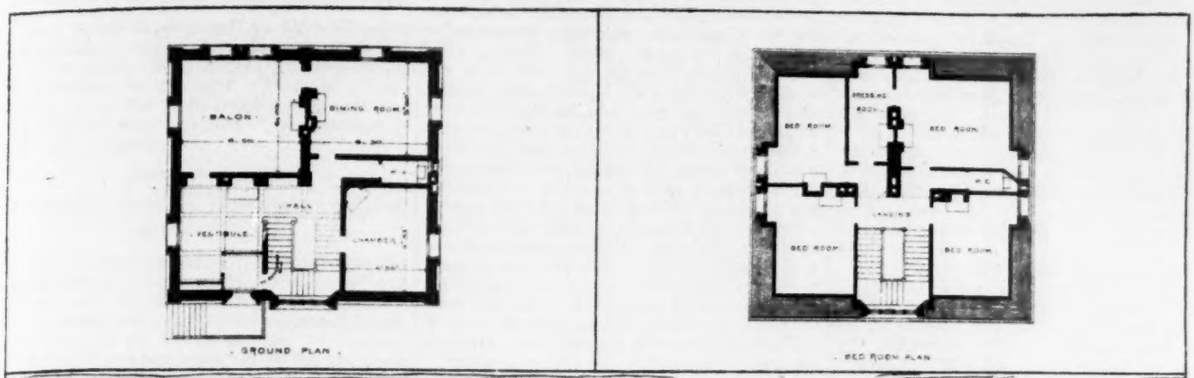
Whitaman & Barr, *Photo-Litho*, 256 High Holborn

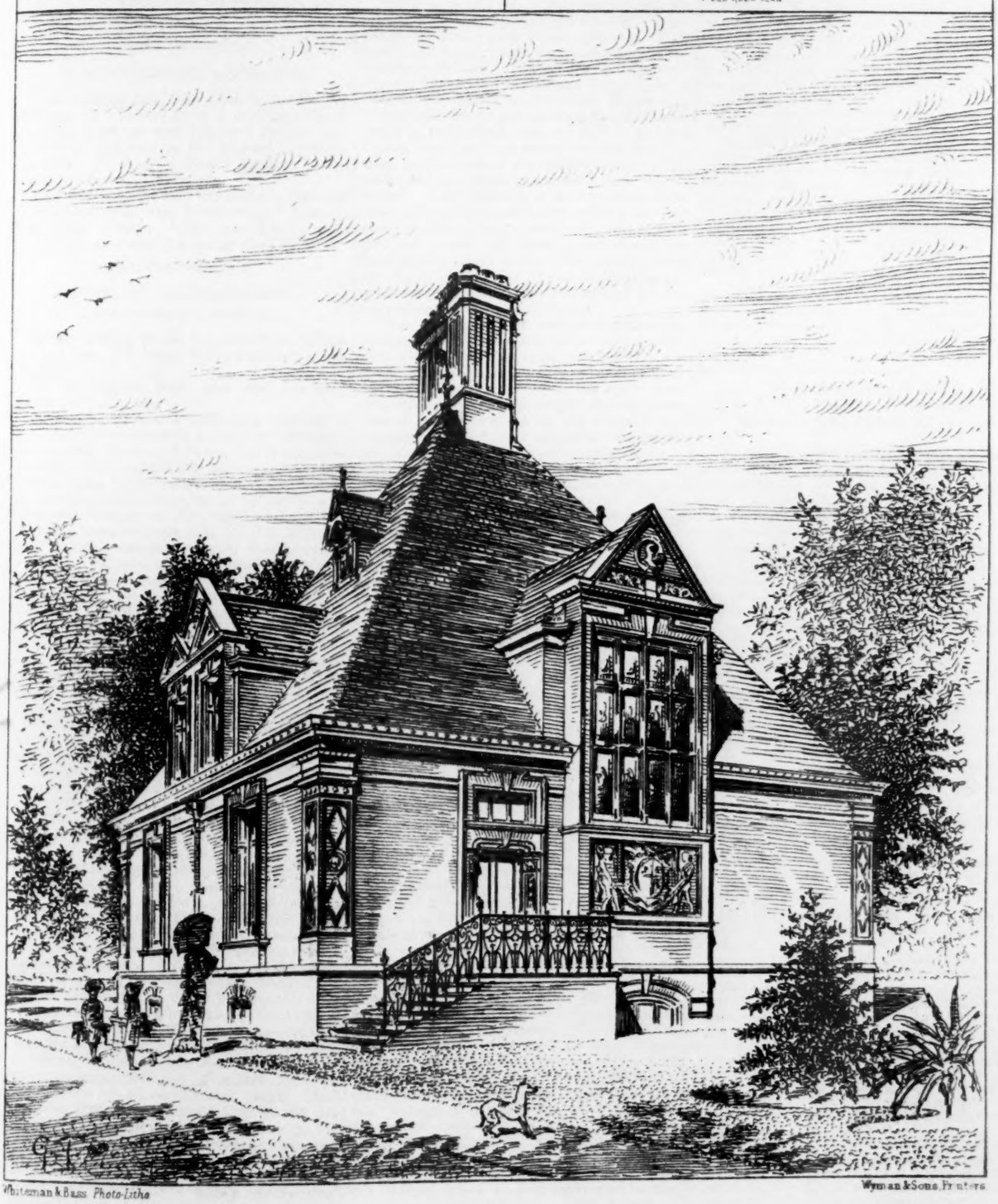
Whitaman & Sons, Printers, Queen St.



Church of Our Lady of Good Aid, Hackney Wick: the Principal Entrance

THE BUILDER, MARCH 11, 1882.





Whiteman & Bass *Photo-Litho* Wyman & Sons, Printers

A HUNTING LODGE IN THE ARDENNES, FOR THE DUCHESS OF OSSUNA.—Mr. Edward J. Tarver, Architect.

A PRIVATE SCHOOL NEAR LANCASTER.

THIS school is proposed to be built on a vacant plot of land a short distance from the town, for the Rev. Wm. Burton. Accommodation is provided for 120 boys. There is a large dining hall at the back, which will be used as a lecture-room when required. The architect is Mr. Jas. A. Burton.

PROPOSED ROMAN CATHOLIC CHURCH, MOTHERWELL.

ONE of our illustrations this week is the proposed Catholic Church of Our Lady of Good Aid, Motherwell, for the Very Rev. James Glancey, D.D., which will probably be commenced soon. It is in the (R. C.) archdiocese of Glasgow. The church has been designed by Messrs. Pugin & Pugin, of Westminster.

A HUNTING-BOX, ARDENNES.

THIS hunting-box has been built for the Duchess of Ossuna, from a complete set of working drawings and full-sized details, prepared and sent out by Mr. Edward J. Tarver, architect. It is appropriately situated in the historical Forest of Ardennes.

Few who visit the spot are likely to feel with Touchstone, who, first exclaiming,—"Now am I in Arden"; adds,—"The more fool I; when I was at home I was in a better place."

IDEAL DWELLING-HOUSES.

ARCHITECTURAL ASSOCIATION.

AT the meeting of this Association on Friday, the 3rd inst., Mr. Aston Webb, president, in the chair,

Mr. E. Ingress Bell read the following paper:—

In considering how I could best respond to your invitation to furnish a paper for discussion this evening, it occurred to me that it might be not altogether unprofitable or inopportune if I were to bring to your recollection some pictures of domestic architecture, drawn for us by contemporary masters in the higher walks of imaginative literature, and that the "ideal dwellings" which these pages supply would,—when viewed in the light in which I shall endeavour to present them to you,—repay a little attentive examination. For, although you may not at first feel disposed to attach much importance to the individual opinions and preferences of the writers alluded to when they treat of architecture, there are, nevertheless, certain circumstances connected with their treatment of the subject which are, I submit, worthy of our careful consideration.

We must bear in mind, first of all, that they are themselves artists, and that all art is one in principle, however various may be the media of artistic expression. Their minds are, therefore, presumably, open to a recognition and appreciation of true art wherever they may meet with it. The art they exercise is, moreover, closely allied to our own, inasmuch as it is a creative one. By means of a multitude of minute touches, which may be not unreasonably likened to the materials which the builder employs, they construct a complete, effective, artistic, and consistent whole. They must, while giving the utmost finish to their works, resist, as we are called upon to resist, all temptation to such an over-elaboration of details as would detract from the general unity and impressiveness of the design. The MSS. at South Kensington show us the care which was bestowed on the finish of their works by authors whose flowing style reads with the glibness of perfect spontaneity,—how sentences, phrases, words even, were written and re-written, times out of number, until the exact shade of expression was caught. And we know, from other sources, that to the last moment the general structure of the story, the due relation of the several characters, their proportion, and relative prominence, were subjects of the most anxious and even painful thought.

There is more than a merely etymological affinity between their "plot" and our "plan." Both demand the same inventive faculty,—the same fertility of resource, the same unwearying nicety of adjustment; and the ordering of telling masses, the grouping, light and shade,—the supremacy and subordination of the parts, the antitheses, contrasts, and little verbal artifices, and even the dramatic incidents and situations (all disposed with a view to the general effect), find a close if unsuspected analogue in our own really successful work. As artists, their minds are, as I have said, specially receptive; their instinct rarely betrays them into admiration of what is worthless; and although they are not, of course, alive to purely technical excellencies or defects, they are, from habit and experience, predisposed to appreciate the higher qualities of architectural art, and, in their descriptions of it, they generally seize upon its broader effects. Their callin moreover, demands an insight into human character; and we, who live, I fear, too much in a narrow world of our own, and regard our art too exclusively from one particular point of view, may learn much from writers who stand, in some measure, as interpreters of the public sentiment and indexes to the public sympathies.

For, it is of the very first necessity that the writers in question should place themselves completely *en rapport* with their audiences. They do not address us from the vantage-ground of an official platform. Unlike the preacher and the moralist, whose unpleasant duty it is to admonish or rebuke, their function is primarily to entertain; and their art finds its only opportunity in the interest they are able to awaken. Unless, therefore, they are in harmony with the views and feelings of the classes to whom their works are addressed, those works will remain unread. Their success is in proportion to the community of sentiment between them and that world to which they appeal. And the remarkable, and indeed, unbounded, success achieved by writers to whose works I shall presently more specifically refer is an evidence of the skill and certainty with which they have touched some of the common instincts of humanity.

When such a body of writers, distinguished by keenness of observation, and a close acquaintance with human character and motives, are found to be in accord on any particular subject, we may be pretty sure that the world is on their side; and when the subject of their agreement is the art in which we are all more particularly interested, their utterances assume for us a value which we must not under-estimate.

My present business is to suggest that, on the subject of domestic architecture, there is a very remarkable general agreement amongst them, and to submit that the particular variety of the art which enlists their common sympathy has, for the reasons above adverted to, a special and peculiar claim upon our attention. I propose, then, to place before you some short extracts from the works of a select few of the writers alluded to,—selected, not because they happen to make for any preconceived view of my own, but because they are representative men of their class, and, beyond all controversy, the most eminent in their own peculiar domain. And I would invite each one of you to test my theory from your own wider range of reading, and so, either to confirm or confute it.

The first place is due to the poets (although they will not, for obvious reasons, have, *for us*, the same value as their literary brethren), and your thoughts will instantly turn to the Laureate's elaborate picture of an ideal palace, "a lordly pleasure-house,"—a mansion "royal-rich and wide." He gives us at the outset a sort of block-plan of the structure. There are four courts, each with a central fountain and enclosing cloisters. There are "long-resounding corridors," great rooms and small, "all various, each a perfect whole," and so on. Becoming impatient of these prosaic details, he breaks forth into a rapturous eulogy of the ornamental portions of the structure,—the gilded balconies crowned by censing angels, the wall-paintings, the traceries of costly stones, the perfumed incense, and all that wealth of seductive imagery with which the poem abounds. The bias of his mind is distinctly seen, and we could almost draw in detail the splendours he dilates upon with so much unction. In very weariness at this unrelieved beauty, he turns at length for repose to a "cottage in a vale"; but his final aspiration is still towards those palace towers, "so lightly, beautifully built," and to the graceful forms and lovely colours which are with him an over-mastering passion. We can easily epitomise this supreme effort to give expression to the poet's ideal pleasure-house. Lofty towers, a various skyline, bristling with gilded statuary; frescoes, mosaics, gold,—a more than Oriental blaze of colour to enchant the eye,—and, faintly audible throughout, the plash of perfumed fountains, to lull the sated sense. This is, of course, a "castle in the air." It is the *soul* which is to sit apart in contemplation of all this sumptuous array of treasure, or pace, in pensive isolation, the shadowy cloisters of its silent courts. But the picture is valuable as showing us the direction in which this perfect artist sought an image of the utmost conceivable architectural magnificence.

From one of the most beautiful of modern poems, the "Earthly Paradise," I could cull countless passages repeating the same feeling, and in which the poet, dealing even with Grecian myths, gives the architectural accessories an ideal character differing but little from the above.

But to leave these aërial flights, and descend to a firmer footing, let us turn to the "ideals" of some of our most renowned writers of fiction. To begin with the greatest of them all, you will remember well, in that immortal work, "Esmond," the description which its author, with the feeling of a true artist, gives of the ancient home of the Castlewoods:—

"It stood on a rising green hill, with woods behind it, in which were rooks' nests, where the birds at morning, and in returning home at evening, made a great cawing. At the foot of the hill was a river, with a steep ancient bridge crossing it, and beyond that a large pleasant green flat.

The Hall of Castlewood was built with two courts, whereof one only,—the fountain court,—was now inhabited, the other having been battered down in the Cromwellian wars. Still in good repair was the great hall, near to the kitchen and butteries, a dozen living-rooms looking to the north, and communicating with the little chapel that faced eastwards, and the buildings stretching from that to the main gate, and with the hall, which looked to the west into the court now dismantled.

The Restoration did not bring enough money to the Lord Castlewood to restore this ruined part of the house, where were the morning parlours; above them the long music gallery, and before which stretched the garden terrace, where, however, the flowers grew again which the boots of the Roundheads had trodden in their assault."

In the "Virginians" there is a further reference to the old Hall, "grey with many gables and buttresses, and backed by a darkling wood."

This faithful loving portrait of so many an old English home,—so tender and so true, so broad and painter-like in its sweep,—brings the whole scene instantly before us. We seem to stand beneath the lichen-covered walls, and to listen to the drowsy clamour of the rooks.

If it should be urged that this is a picture of a *real* house, and not of an ideal one,—that its features are such as belonged to houses of its class at the date at which the story is laid, that they were prescribed by historical necessity, and, as such, unavoidably adopted by the author, I would suggest that the treatment of the subject shows clearly enough where the painter's *heart* was. For, let us set against the tenderness with which he portrays for us this dear old Castlewood Hall, the almost savage scorn with which he outlines, with equal precision, the country seat of my Lord Carabas:—

"At the entrance of the Park there are a pair of great, gaunt, mildewed, lodges,—mouldy Doric temples,—with black chimney-tops, in the finest Classic taste."

He gave the porter a shilling (the first he had seen for some time) and proceeded.

"The gates were passed; a damp, green stretch of park spread right and left, immeasurably; confined by a chilly grey wall.

In the midst of the park is a great tank, or 'lake.' A shabby temple rises on an island, and is approached by a rotten barge, that lies at roost in a dilapidated boat-house.

The house was an enormous mansion, square, vast, and dingy. It was flanked by four stone towers with weather-cocks. Rows of black windows, framed in stone, stretch on either side right and left. Three stories, and eighteen windows of a row! In the midst of the grand façade is a large Ionic portico, approached by a vast, lonely, ghastly staircase.

But these stairs the great people do not ascend. Lady Carabas would be wet to the skin before she got half way up to the carved Ionic portico, where the four dreary statues of Peace, Plenty, Piety, and Patriotism are the only sentinels. You enter *these* palaces by back doors.

Up the long avenue I walked in solitude. At the seventy-ninth tree on the left-hand side the insolvent butcher hanged himself. I scarcely wondered at the dismal deed, so woful and sad were the impressions of the place. For a mile and a half I walked, alone, and thinking of death."

You will here note the lavish employment of adjectives to heighten the effect—"gaunt," "mouldy," "ghastly." They are piled one upon another in a manner which, in less practised hands, would have defeated their author's aim.

If you think this redundant use of them unfair, I beg you to remember that such a view would make for my contention, by showing the strong animus of the writer when dealing with one particular variety of architectural style, a temper of which his works supply numerous examples.

If, in the case of Castlewood, the circumstances connected with the story may have dictated the kind of structure to be sketched, no similar necessity was placed upon the author in this latter instance. Here, in the unfettered use of his discretion, he has chosen to associate all that is sordid and worldly, all that is at once pompous and mean, with architecture of a type with which we are all familiar. Words could not convey to the mind a more depressing scene than the one presented to us with elaborate sarcasm. There is something almost ferocious in the irony with which he names the four statues adorning the useless and unused portico of this poor bankrupt noble, in whose forlorn mansion there may still, let us hope, be a place for patriotism, scarcely for piety, and assuredly not for either peace or plenty. The darkest touch of all is the suggestion that the suicide of the insolvent tradesman was due to the delinquencies of the noble marquis. Now, you will not, I hope, suppose that I go so far as to suggest that bankruptcy and suicide are concomitants of Palladian architecture. Kindly keep in view my main position, viz., that in the minds of these most observant and popular of all writers, empty display and cold discomfort are almost always associated with one type of dwelling, and that the hospitalities, the amenities, and the joyfulness of life are as invariably associated with another type.

The "ideal dwelling-house" of the novelist is, in short, an eminently picturesque one: upon some of its special characteristics I shall touch presently. It is generally drawn from Tudor or Stuart originals,—and the worst that can be laid to its charge is a reputation for the possession of some harmless ghost which only adds piquancy to the general interest.

By way of further illustration, let us pass to the works of a writer of scarcely less originality and power than the author of "Esmond," the authoress of "Adam Bede," than whom no writer of modern fiction has shown a more lively sense of the distinctive charms of English landscape, or the possession of a truer appreciation of our native architecture. The following is, perhaps, one of the most perfect architectural miniatures ever drawn, having all the truth, grace, and sweet suggestiveness of a picture by Frederick Walker:—

"Mr. Garth's house was a little way out of the town,—a homely place, with an orchard in front of it; a rambling, old-fashioned, half-timbered building,—which, before the town had spread, had been a farmhouse, the attics still smelling deliciously of apples and quinces."

We can easily supply the missing features,—the boldly-jutting fireside nooks, the varied and fantastic grouping of the chimneys, the hospitable porch, the mullioned windows. We see clearly the type of house which claimed her admiration. It is said that in the house above described the authoress passed her girlhood. However that might be, her object certainly was to present us with a picture of an attractive middle-class English home. If she took a real house for her model, it was because in that she found her "ideal." If there were any room to doubt her preference in this matter,—a preference which all her works make quite clear,—the following pregnant passage from her pen would set the matter at rest. "We get fonder," she says, "of our houses if they have a physiognomy of their own as our friends have." Thus the varied and artistic treatment of domestic architecture, such as that which differentiates the Mediæval, Tudor, and Stuart styles, was that which evidently commended itself to her sensitive and refined nature.

And similar instances, in any required abundance, might be given from writers of the first rank, including even Carlyle. In order to obtain a sufficiently wide base for my argument, I have, although not a novel reader, dipped into all the modern higher-class novels at hand, and I find that on this subject the writers are "all in a tale." I will not quote from them in detail; but if I am not wearying you with these pen pictures I should like to read you one more extract. I have saved the most delicate morsel for the last; and although you have all met with it, and many of you may remember it well, you will, I dare say, excuse my closing the series with a picture by the master-hand of Dickens. It is a really delicious piece of most appreciative and artistic description; in which we get a glimpse of the interior, as well as of the exterior, of *his* "ideal dwelling-house,"—an ideal which recurs with but little variation throughout all his works. "It was one of those delightfully *irregular* houses";—and here one may pause to observe that this is the characteristic which is always appreciated by the artist, whether his medium of expression be the pencil or the pen:—

"It was one of those delightfully irregular houses, where you go up and down steps out of one room into another, and where you come upon more rooms when you think you have seen all there are; and where there is a bountiful provision of little halls and passages; and where you find still older cottage rooms in unexpected places, with lattice windows and green growth pressing through them.

Mine was of this kind, and had more corners than I ever counted afterwards; and a chimney (there was a wood fire on the hearth) paved all round with pure white tiles, in every one of which a bright miniature of the fire was blazing.

Out of this room you passed into a little gallery with which the other best rooms communicated, and so, by a little staircase of shallow steps, with quite a number of corner stairs in it considering its length, down into the hall.

From this you came on a room which was part library, part sitting-room, part bedroom, and seemed, indeed, a comfortable compound of many rooms.

Out of this you went straight, with a little interval of passage, into a plain room, with a small room adjoining; or you might, if you came out of another door (every room had at least two doors) go straight down to the hall again by half a dozen steps and a low archway, wondering how you got back there.

Such, with its illuminated windows, softened here and there by shadows of curtains, shining out upon the starlight night; with its light, and warmth, and comfort; with its hospitable jingle (at a distance) of preparations for dinner; and just enough wind to sound a low accompaniment to everything we heard, were our first impressions of the house."

And then follows a similar description of the quaint old furniture which adorned and completed the dwelling,—a description which is too long for me to read to you.

Now was there ever drawn so delightful a picture of a delightful house? "Delight-full" is surely the only word that will properly describe it. It combines all the best points of those houses previously adverted to, with others not found in them at all: Tennyson's "great rooms and small,—all various,—each a perfect whole"; the halls and galleries of Castlewood; the cosiness of Mr. Garth's homely cottage. It is crammed full of suggestions and studies for a painter, and over all comfort reigns supreme. The planning is not the cold, formal arrangement of a suite of public offices, or the like,—proper enough in its place; it is just that charmingly artful, though apparently haphazard, disposition, whose end is perfect convenience, providing alike for the freest social intercourse and the completest personal retirement, and compared with which the balance, compactness, precision,—I had almost said the priggishness,—of Classical plan is as prose is to poetry, or as water is to wine.

If you will call to mind the works of those contemporary architects who have distanced all competitors in their success with domestic work, you will find that they faithfully reflect the peculiarities of the buildings sketched for us above,—the side-lighted long and wide galleries, the quaint little halls and nooks, the many-cornered rooms, the broad, low, many-lighted windows with seats beneath their sills,—in short, all the little adaptations, expedients, and surprises in plan, arrangement, and general design, upon which so much of our interest in the old work turns. So closely do these successful modern works resemble those whose descriptions I have read to you, that it would be impossible not to believe that the architect had followed the novelist, did we not know that both were alike indebted to those charming originals which are still left to us in happy abundance throughout the length and breadth of the land, and which seem to be (as indeed they are) a part of the progressive growth and life of the nation. In this they possess a marked advantage over those imported examples of the Italian Renaissance, which, however excellent they may be in the abstract, appear to be (so to speak) beyond the nation's power of assimilation.

To take an instance. Few buildings have been so fortunate in securing the unanimous approbation of the critics as the fragment of Inigo Jones's palace at Whitehall. Its proportions, detail, and *ensemble* have each and all received unstinted praise. It is, moreover, connected with, perhaps, the most tragic incident in our annals. The window through which a king walked to meet an ignominious death at the hands of his subjects still looks down upon the broad and populous street. For years I have occupied a room facing that building, and I think I may say that, with the exception of some foreign or American tourist, I never yet saw a human being pause before it, notwithstanding this double claim upon his attention. The foreign manner in which it is designed not only fails to arouse any interest in the beholder, but it would almost seem to possess the sinister property of effacing all remembrance of the tremendous scene to which the building was a witness. The continuity of historical sequence is broken by it, and it is incredible that so un-English-looking a structure can really form an integral portion of English history. Allied with much that is unapproachably excellent in our native architecture of the sixteenth and seventeenth centuries, there are, no doubt, many defects from which this example is free; defects of style, of taste, of execution, of construction perhaps. From the circumstances of the time this could not well be otherwise.

I am not now concerned to defend our English Renaissance architecture, or its modern counterpart, from the charges brought against it by the purist and the *doctrinaire*. If I were I might appeal from the art of Shakspeare's time to that of Shakspeare himself. No one treated all merely pedantic rules and prescriptive limitations with a more audacious freedom. His anachronisms, anomalies, and inconsistencies (about which he was quite careless), can be pointed to by every critical numskull. But his works will, nevertheless, remain a *power* and a delight till time shall be no more, whilst the classical drama of succeeding century, with its punctilious regard for the "unities," and all its mechanical perfection of mere form, is already a dead thing.

The truth is, there are qualities about our old English houses akin to those inspiring our old English ballads, which, with uncouth diction and (may be) halting metre, still find their way straight to the heart, more swiftly and more surely than if clothed with the classic purity of Milton, or the perfect literary finish of Pope.

I shall not trespass much further upon your patience. You will, I hope, agree with me as to the fact that, from various considerations,—social, historical, and artistic,—architecture of a certain type is invariably associated, in the minds of a most observant and popular school of writers, with pleasant images; and further, that from the unique position which they occupy in the world of letters, it is reasonable to infer that they represent the public sentiment, and have, in fact, furnished us with a clue to the public sympathy.

The problem before us all is to maintain and increase our hold upon this sympathy, by cultivating those special charms and graces which our forefathers never failed to impart to their works, and by adding thereto those sanitary and other ameliorations of which a less fastidious age did not feel the need. The artistic instincts of your average client are not robust enough to put up with the smallest discomfort for appearance' sake. If your pretty casements let in the wind and the rain, nothing can save them. He will have them out on the first opportunity, and substitute for them gaping sashes, which will destroy at a blow the scale of your building. Our concern, then, is to see that they are weather-tight, and we may retain them. Gables and dormers mean gutters and flashings. Let us look to our plumbing. If that is defective, they, too, will go, to keep company with the casements, and our work will be robbed of a valuable source of effect. And so on through the whole catalogue.

The first desire of those who build is *comfort*. Like the aspirant in Tennyson's poem, their chief longing is "at ease" to dwell. Their house is a retreat from business and the "carking cares" of life; and everywhere within its walls you may read (with the mind's eye) "there is no joy but calm." Make, then, as a first step, your client perfectly comfortable, and, believe me, you will find that he is, like the rest of the world, amenable to the charms of a really and rationally artistic design. If he hesitates at the outset it is because he fears that something is to be sacrified for effect. Disabuse his mind

of this, and the shape which the house shall take is practically wholly in your own hands. In determining that shape we ought, from every motive, to adopt a manner which appeals to the widest sympathies. For domestic work, there is one style which, in spite of all that may be said against it, has the overwhelming recommendation of being already established in the affectionate regard of the nation, and enshrined in our national literature, and it is to the further development of this style that we should, in my opinion, bend all our energies. You will, perhaps, ask why, if the public really enjoys this picturesque architecture of the sixteenth and seventeenth centuries, and we are in accord with the public preference, do you address us on the subject? I answer, because there are signs that we are on the eve of another change. Forgetting that it is one of the principal ends of art to appeal to the imagination, we are beginning to question the *rationale* of these mixed styles, and are investigating their character and antecedents. It has been shrewdly remarked that our passage from the genuine Mediæval to the "pure" Classic was by way of these styles, and that we are now repeating the journey,—a journey which can only end in a *re*-revived Classic. This consummation is awaited by many with undisguised satisfaction, and the chorus of acclaim is daily increasing. In my humble opinion, it would be, so far as domestic architecture is concerned, a calamity. And therefore do I put in my plea (on grounds which I do not remember to have been urged before). Upon you it will mainly depend what the architecture of the immediate future shall be. And I respectfully leave it to your judgment whether it would not be a blunder to adopt again an alien manner, which has nothing in common with our national habits or traditions,—and which probably no art can render permanently acceptable to the English mind; and to abandon a style in the revived use of which we have already attained a marked proficiency; which is flexible enough to meet all our wants; which lends itself to the employment of any material, however humble; which has been popularised and endeared to us by writers of enduring fame; which has its roots deep down in the national life and in the national memories; and which possesses, moreover, in a pre-eminent degree those attributes which never fail to charm alike the poet, the painter, and the man of letters.

DISCUSSION.

The Chairman said that Mr. Bell had given them a delightful architectural pastoral, setting forth,—without many details, however,—what he would wish to see, and what, no doubt, many of them would wish to see. A dwelling-house, as Mr. Bell had rightly said, should be built in the style of the country in which it existed, and an English house should not look like an importation from Italy or elsewhere. How far Mr. Bell's ideals of dwelling-houses were compatible with modern requirements he had stopped a little short of telling them. Low windows, such as were a feature of the Tudor style, were hardly suited to modern requirements in the way of ventilation, and it was not likely that the generality of people would care to be obliged to go upstairs or downstairs in merely passing from one room to another. As to corridors, he quite agreed with Mr. Bell that a good corridor was a delightful feature in a building, but, at the same time, it was very wasteful. If it took the form of a long side-lighted gallery, in which pictures and other works of art could be placed, it formed a very charming feature in a building; but corridors which were mere end-lighted passages from one part of the building to another were very undesirable, and should be dispensed with wherever possible, even though they formed playgrounds which were very popular with the children of the house. As to the desirability of every house possessing a physiognomy of its own, he thought that the architect should try to get hold of his client's ideas, and then try to express in the building the character of the man (if he had any). Mr. Bell's remarks had dealt exclusively with ideal houses in the country, but something might usefully have been said on the subject of ideal town-houses.

Mr. Thomas Blashill had much pleasure in proposing a vote of thanks to Mr. Bell for his paper, which had been very pleasant in manner and matter, and was very far from being, in any part of it, short of real utility. He thought that Mr. Bell had been a little too hard upon the Classic style, but he was inclined to sympathise with him. He (the speaker's) experience of Palladian architecture had not been very fortunate. Not very long ago he made a pilgrimage to the home of Palladio, Vicenza. On the day of his visit it happened to be raining hard, and he saw Palladian architecture from under an umbrella. The aspect was really miserable, and he felt very much as the unfortunate butcher mentioned in the quotation from Thackeray must have done. That was in what was ordinarily termed "sunny Italy." In this country the climate differed so greatly from that of Italy that they might very safely act upon Mr. Bell's advice and abstain from importing Italian styles. Dickens, in addition to the passage cited by Mr. Bell, gave a very interesting picture in one of his works as to the effect of history upon buildings, pointing out how much more interesting buildings were to us when we knew that great people had lived and died in them, and that their halls had resounded to the pattering feet of children who became famous men and women. But, because such associations were part of the old buildings of the kind which Dickens and Thackeray described, it must not be thought that a mere reproduction of the old forms in buildings which had no old associations would or could be as interesting as the old buildings themselves. With regard to "George Eliot," one remark which she made regarding architects was very unfortunate. It was to the effect that "Adam Bede could do work about a house very much better than it could be done by an architect." Such an observation, coming from a writer of "George Eliot's" judgment, was, it was to be feared, dictated by some bitter experience.

Mr. Gilbert R. Redgrave, in seconding the vote of thanks, said that the ideal houses which had been treated of by Mr. Bell were pre-eminently houses for the country, and they were, there could be no doubt, greatly helped by the landscape, of which they might almost, indeed, be said to form part. It would be very difficult to imagine houses of the kind which had been described set down in Gower-street or in one of the new thoroughfares of South Kensington. In addition to the authors who had been quoted, however, it should not be forgotten that there was another set of authors who had glorified, so to speak, another type of house, viz., the brown or dark red houses of Kensington,—the "Old Court Suburb." The influence of the literature of one generation upon the architecture of the next generation had often been pointed out, more especially in connexion with the Gothic revival. Admitting the picturesqueness and charm of Haddon Hall and buildings of a similar type, it was, he thought, very questionable whether such buildings, if erected at the present time, could be made conformable to modern requirements.

Mr. Hampden W. Pratt spoke of the novels of Mr. Thomas Hardy as of peculiar interest to architects, seeing that before Mr. Hardy became a novelist he was an architect. Mr. Bell had very rightly insisted upon architects making it their first study to build comfortable houses, superadding to comfort artistic appearance as far as the means available would allow. To sacrifice comfort for appearance' sake was not a thing that would be done by any architect worthy of the name. Those who would pursue that course were quacks, not properly-qualified architects, and it was such men who brought disrepute on the whole profession.

Mr. Cole Adams said that, much as we might love such old houses as had been so graphically described by the authors mentioned, and much as we might reverence them for the sake of the associations connected with them, was it desirable, even if it were possible, to reproduce them? He thought not. He saw no reason why honest building done at the present time should not acquire the charm that attached to buildings of a previous age.

Mr. A. B. Pite thought that picturesqueness should not be purposely aimed at in house-building. If a client's requirements were carefully studied and honestly met, picturesqueness would take care of itself. It was a remarkable thing that all good building improved in appearance with age, while, on the other hand, it was only bad building which looked well when new.

In the course of a few concluding remarks, Mr. Bell expressed himself as touched by the extreme kindness with which his paper had been received. He had anticipated the very natural criticism that Thackeray, Dickens, and "George Eliot" had not inhabited the kind of house they so lovingly described; but fearing his paper would be too long for his audience he had skipped that with other matter. As to the question of corridors, he would take this opportunity of saying that he was no advocate for the end-lighted corridor, his preference was wholly for the broad side-lighted gallery, with fireplaces at intervals along one side, and bay-windows on the other; an apartment, connecting the principal rooms, and which might be used for dancing, as in Elizabethan times, or for an indoor promenade in inclement weather, and for indoor exercise and recreation in many forms. With reference to some remarks which had been made as to economy in planning, it would, of course, appear on reflection that,—leaving the circle out of account,—you get the greatest superficial area with the least perimeter by the use of the perfect square, and the greatest cubical space with a given expenditure of material by a perfect cube. So that if economy be the sole aim, a house should consist of perfect cubes comprised in a perfect cube. But that was not art. Any departure from that figure for the satisfaction of the æsthetic sense was, *pro tanto*, costly,—and why not? Art was worth paying for, and could not be weighed against strictly economical considerations. As to high *versus* low windows, if it were said that high windows were provided with the view of securing ventilation, he thought it easy to show the futility of such an arrangement. It seemed to be tacitly accepted as sound theory that if lofty windows in a heated apartment were opened at the top the hot air would go out; whereas the effect would be that instead of the heated and vitiated air passing *out* at the top of the windows, the cold air from the outside would fall *into* the apartment, rendering a great portion of it uninhabitable. As to the possibility of reproducing the manner of the old houses while meeting the needs of the present age, the thing had been done by architects whose names would occur to all his hearers.

The meeting then terminated.

THE EDUCATION OF THE ARCHITECT.*

THE position of a follower of architecture is a peculiar one. Unlike a painter or a writer, his powers of expression are bounded rigidly by the demands of constructive science, by financial considerations, and the needs of another, and perhaps unsympathetic, party. All efforts in the direction of originality are to be subservient to utility. However beautiful in appearance, however fruitful of picturesque or artistic bits a building may be, if it does not fulfil the purposes of its erection, it must be accounted a failure, and its originator a man unreliable and unworthy of support.

This fact, the overwhelming one of the architect's life, should be the motive influence of all his office training. His earliest efforts should be directed to this consideration. The first and most important item of knowledge that an architectural student should acquire ought to be, that an architect is the servant of science; that all his works, practical or artistic, are founded upon its teaching; that however beautiful and charming to the eye a design may be, if it is not sound in construction, if it does not obey the laws of science applied to buildings, its author is one not to be admired and courted by his fellows, but one to be despised and looked upon with contempt. I do not know that any feature of the times, as far as architecture is concerned, is a sadder one than the development of a good deal of the work done of late under the name of Queen Anne. Mind, I am not altogether decrying the style. There are many admirable features about it, and it certainly has done good service to art. But I do call in question a great deal of the application of it. Whilst the Gothic revival lasted much of the work done under it was carried out on the sound principle of overlaying the ornament on a well-constructed skeleton, which it clothed, indeed, with flesh, but whose form and logical purposes were properly preserved and emphasised. But with a great deal of the Queen Anne work the constructive framework of the buildings has no expression, either externally or internally. The constructive portion is one thing, the ornamental quite another. They have no reference to each other. Even where the basis is sound

* From "A Real and an Ideal Architect," a paper read before the Leeds Architectural Society, by Mr. J. Wrightt Connon, F.R.I.B.A.

and properly put together, it has no influence on the clothing of design. Beauty, so called, is added to the bare building, to which it has no proper artistic attachment, and from which it might be removed, and taken elsewhere, or replaced by other and altogether different features, and the building be yet wholly unaffected. Now unquestionably this is the outcome of an improper early training. The education given is not logical and rational, but haphazard and tentative. To expect construction and the science of building to be learnt by sketching is as absurd as to think a doctor could learn anatomy and physiology by drawing a draped figure. The medical student commences by dissection. He investigates the skeleton, the framework upon which the flesh and muscles are covered. Least of all does he trouble himself with the covering of cloth or silk, or cotton, that artifice uses to conceal nature. The modern architect's mode of procedure is just the reverse of this, and is just as irrational and absurd as the other is reasonable and praiseworthy. He goes forth, note-book in hand, and sets down in dainty black and white, or delicate colour, the bows and ribands, the lace trimmings and fancy work of the architectural figure. It is a pleasing pursuit. The student gains health and robustness in the open air, with an inner satisfaction of conscience that he is laboriously acquiring a knowledge of his profession. But does it serve in the day of trial? When prosaic clients demand cheap construction, the beatific visions of youth decline to translate themselves into modern bricks and mortar; a frantic appeal to Nicholson produces a solution to every problem but the one set the despairing architect. No doubt, the task is done, but how? With shores and props, and mysterious rods inserted where palpable decrepitude demanded them, but applied without system or science, and speaking in every corner of its author's ignorance of the art he professed.

A complete architect has a threefold character, as I said before,—that of a constructor, a man of business, and an artist. The two latter are largely congenitals. They can be cultivated and improved, modified and assisted; but can scarcely be taught in one who has no natural bent in their direction. Time and experience can alone test ability in them, and time and experience will make them felt if they are present at all. Nor are they in an abnormal degree, absolutely necessary. Mind, I do not say they are unnecessary, but not necessary absolutely to this degree. A man may make a very fairly satisfactory architect in some lines of work, and be no artist. The largest moiety of our architects are not artists. A considerable number of the most highly esteemed amongst them are not. Nor is it perfectly essential that, in any special degree, he should be a man of business. It is desirable, very, that he should be so, yet he may be fairly successful without much business capacity; but a constructor he must be. The public have a right to, and do expect, that every architect should be this. Would any client be so demented as to wait upon one of us with a commission if he was sure that scientific skill in dealing with materials was at zero; or that the professional man he consulted was incapable of passing the first standard of the architectural infant school? Without a knowledge of construction one cannot be an architect, and a thoroughly intimate acquaintance with it is of so much importance that it should be taught with the exactness of a course of mathematics, and certainly not in the chance way characteristic of existing systems.

Of course this chamber acquisition of knowledge must be supplemented regularly and constantly by outdoor application of its teachings. The information that smells of the midnight-oil is insufficient without it has received the test of having its teachings applied to the real work around. The study at the desk must go hand in hand with the workshop and the bench. The importance of this is so palpable and indisputable that I scarcely care to enlarge upon it, further than to say that the methodical survey of actual works in progress is an essential part of a student's training, and must in nowise be neglected.

Our ideal architect having gone through his course of preliminary training and his term of pupilage, it is surely desirable that some mode of testing the extent of his acquirements should be applied. I am no very enthusiastic supporter of examinations *per se*. Certain valuable mental qualities, such as tact and readiness of resource, can scarcely be proved by them, and to a small extent their results are a little subject to accident and the favours of fortune. But the main point always remains. We have no other test that can be applied as a means of approximately arriving at the measure of a person's scholarly attainments. It is Hobson's choice if we are to have any trial of capacity at all. The time has now come when, in the interests of each genuine member of our profession, we shall be able to say of every new architect,—This man has satisfied us that he possesses acquired knowledge of mathematics, applied science, construction, and the literature of architecture to a sufficient degree to justify clients in giving him their confidence.

A PRACTICAL STUDY ON VENTILATION.

THE LONDON CUSTOM-HOUSE.

SIR,—Attracted by a grandiloquent and laudatory report upon "Experiments at the London Custom House with Boyle's System of Ventilation," published in and republished from *Industry*, January 22nd, 1881, and by the names of the distinguished scientists who conducted the said experiments, among whom were Dr. B. W. Richardson, F.R.S.; Captain Douglas Galton, C.B., F.R.S.; Dr. Corfield, Professor of Hygiene, London University College; Sir John Monckton, Town Clerk; E. Shepherd, Collector, H.M. Customs; Ernest Turner, F.R.I.B.A.; Rogers Field, C.E.; Bailey Denton, C.E.; A. Murray, City Architect's Office; and a large number of representatives of the public press, I recently took an opportunity of inspecting the results, hoping to learn much therefrom on the important subject of ventilation of public buildings.

I am free to confess,—I write, of course, as a fool,—*i.e.*, an architect,—that in this particular instance a mountain in labour has produced but a mouse, and that but a sorry and inefficient one, since the lion it was expected to deliver remains yet in its bonds. To drop metaphor, I found that all the Tobin tubes, although recently doubled in height to improve them, were crowned with piles of ponderous ledgers, one apparently having been thought insufficient protection against draughts, or the possible danger of being blown off by their violence, by the Customs clerks.

Yet the problem to be solved in this case was a simple one, and the means adopted were simple also; still their simplicity was less than that of the expectations indulged in that a satisfactory issue could be produced by them. Their failure is much to be deplored as tending to bring ridicule upon, and want of confidence in, the judgment of those who are endeavouring painfully to gain the pubic attention to a great want, and to forward the interests of sanitary science.

The room experimented upon, "the Long Room, one of the largest in the world," is indeed a vast one,—94 ft. long by 60 ft. wide and 54 ft. high' containing 582,000 cubic feet of air space. It is occupied by a numerous staff of clerks, and is considerably thronged by the public. Nevertheless, it was built without any provision for fresh, or for the extraction of foul, air, save by windows, which, being of course kept closed in cold weather, are practically useless. It seems to have been thought that its very size and capacity were sufficient, and that the amount of air it contained would maintain its purity, or be possessed of powers of recuperation for all time.

Such hopes, if indulged in, soon proved fallacious, and the room became a vast reservoir of bad and exhausted air, and the numerous deaths from pulmonary complaints which occurred among the clerks engaged in it, compelled attention to its condition soon after its erection. Professor Faraday and Dr. Ure, so far back as thirty years ago, officially reported that it was one of the worst ventilated rooms in London. The immense size of the room, upon which reliance had previously been placed, was then declared to be in fault, and to be the cause of the difficulty of the problem. Certain supposed improvements were suggested and carried out, which were simple enough, but simply useless. The marks left by these are still to be seen, and may be studied with advantage, as showing one very ingenious method of how not to do it. Large circular iron gratings were inserted in the floor, and the appearance of these must have given the gasping clerks comfortable assurance of an ample supply of the air for which they were panting. Alas! the expectations raised were worse than delusive, for these gratings actually opened only into the room below,—used as a warehouse,—and acted as vents for its foul air, which was even more foul than that in the room above.

Traditions exist of much and continuous manual labour having been employed to pump up this fresh supply, but whatever means were used, their futility became at last apparent, for now these gratings have nothing but their appearance to recommend them, having had solid plates carefully screwed up beneath them. All this time it never seems to have occurred to the experimenters that even to ventilate a small box, holes at the top as well as at the bottom, are an essential requisite.

To pass, however, from this quasi-playful attempt to palliate the evil and grapple with the difficulties of the problem, to the recent one recorded in the report, it is stated that this latter has been carried out by the firm named, under the direction of Her Majesty's Board of Works, and that the system applied by them is a combination of their well-known air-pump ventilators, with vertical tubes as inlets.

Now, in winter this vast room had previously no foul-air outlets of any kind. There were and are windows at each end near the ceiling, and five valves along each side of the arched ceiling, into a space between the ceiling and the roof; from this space there was and is a very large lobster-back cowl "for the purposes of ventilation." Neither the windows nor valves, however, were or are opened in winter, on account of the intolerable down-draughts they would occasion.

There were, and are, two large coal-fire stoves in the room, which have an encouraging appearance by reason of the amount of perforations in parts; these, however, are not supplied, as they obviously should be, with fresh air from outside the building, but actually only suck in air from within the room itself, and re-deliver it heated above, so that the only ventilating office that even these stoves fulfil is by the extraction of a comparatively small amount of air by their smoke flues, which descend and are conducted by pipes suspended beneath the floor into chimney-shafts carried up on the river side of the building. The only inlets for air are the entrance doors, close together on the street side of the room; only two of these are opened, and that but occasionally, as people enter or leave, and they merely open from a large ante-room, also without any means of ventilation whatever, except by the occasional opening of doors at either end from staircases again guarded from draught by doors below. The consequent condition of the atmosphere in the large room may well, therefore, be believed to have been as described in the report, that "when the gas were lighted, the heat and sulphurous vapour was intolerable, and the source of great discomfort and injury to the occupants of the room."

To correct this state of things, the following were the palliatives recently carried out and experimented upon:—

Six ventilators, of apparently 3 ft. diameter, were placed in the ceiling, from each of which a shaft, 1 ft. 6 in. in diameter only*, subdivided into four parts by crossed partitions, was carried above the roof, and there surrounded by cowl arrangements.

Thus six very moderate-sized openings for the escape of heated air were provided, supposing these ventilating appliances unimpeded by wind blowing on to them, or into the openings on the windward side.

For the supply of fresh air, the only inlets into the room are twelve vertical tubes, each 10 in. by 8 in., placed in the bays of the windows, and communicating with the outer air through gratings (the area of openings in which only should be calculated). The report says that, "on testing these air tubes an abundant supply of air was found to be passing into the room, which will prove, and especially in summer [when the windows might be opened and their assistance dispensed with!], of great benefit to the occupants." The said occupants have, however, since hermetically sealed them by piling a stack of ledgers upon the mouth of each of them.

Now, as to the experiments extending over five days and the "tests" employed, it is difficult to understand how these could have been made, so as to have arrived at all accurately as to the number of cubic feet discharged through the 18-in. air-shafts. To be true, the tests should have been applied at the bottom of these or ceiling ends of the shafts. The exhausting power

* The strength of a beam is its weakest part.

could only have been operating in two of the divisions of each shaft at one time, and, as a fact, it is sometimes operating only in one; and there would be actually down-draughts through others in cold weather; and the area in operation is even further reduced by the cowl arrangements at the top of the tubes, which are dependent upon the fitful action, or want of action, of the wind upon their several sides and slits.

So much for the capacity and efficiency of the outlets provided. Then as to those of the inlets: even when not closed up by ledgers, the tubes are ranged only on the riverside of the building, from, according to the report, "it not being considered advisable to admit air from the north side, taking into consideration the odoriferous character of the atmosphere actually found in Thames-street."

These inlets consist of open holes, 2 ft. by 1 ft., in the walls (less solids in gratings?), 288 in. super., having two vertical tubes from each, 10 in. by 8 in., or 80 in. super. each, or 160 in. together. These tubes at first ended some 5 ft. from the floor, and were unprovided with any regulating valves. The rush of cold air being found unbearable, the tubes were afterwards doubled in height, but apparently with no better result.

Now, it must be admitted that six openings of any sort in the roof and twelve from the floor, if not closed, are some improvement over none whatever; but, nevertheless, the proper practical ventilation of the Long Room of the Custom House remains yet a problem to be dealt with.

It becomes, therefore, an important question, What was the value of the experiments made by "the scientists and others"? It would be desirable to know how they ascertained the rate of exhausting power or escape of air in cubic feet, for by the experiments at Kew the rate of speed through a 2½-in. anemometer was called a cubic foot of air.

The uselessness of the inlets in this case would appear from the statement in the report that, "on comparing the action of the ventilators with the room in a closed state with the action when the inlets were open, a difference of only 25 ft. per minute was discernible"! Again, the temperature in the room is said to have been 60°, and that outside about 40°. The total air-space in the room is stated at 600,000 cubic feet; the fluctuating average speed, as tested by Mr. Rogers Field, to have been 525 ft. per minute; for six ventilators, 3,150 ft. per minute, or 189,000 ft. per hour. Dr. Richardson made it considerably more than twice as much. Which was correct? We are, however, told by Dr. Parkes that the air of a room should be changed three times an hour.

On the whole, the statement in the report that congratulations are due for the success of the work done is not borne out, for the result appears, on the contrary, to be an absolute failure; and yet the problem is a most simple one, and in no way rendered more difficult by the size of the room. It is easy to adjust the size of the inlets and outlets required for their respective purposes, and to arrange their exits so that the former may deliver the supply of air without creating draughts, and that the latter be not impeded, but assisted, by their appliances under all circumstances. It is surely possible, also, to apply tests with accuracy, and so avoid the fiasco of such an endorsement of a practical mistake, by misapplication of scientific experiment, as has unfortunately occurred in this case at the London Custom House.

JOHN P. SEDDON.

WOOD PAVEMENT.

SIR,—Having for some years given much attention to the true principles which should be followed in the use of wood for street-paving, you will perhaps allow me to add a few remarks to the correspondence on that subject now appearing in your valuable journal.

I was glad to learn the opinion on the subject of so great an engineering authority as Mr. Rawlinson. And since he appears to have revived the subject with a view to elicit discussion, I trust he will not consider me presumptuous in stating that, though I consider the system he advocates a move in the right direction, it will be readily understood that there are several points both of principle and detail in which I differ from him, my views of the right principles of construction being principally as follow:—

1. Solidity of foundation, such forming the true road.

2. Protection of foundation from surface-water and impact of the traffic, by the interposition of an elastic and impervious medium between the bed and the surface blocks.

3. The most economical use of the surface-material (wood), that in a properly-constructed road being the only portion which should require renewal, and should only be used in such quantity as would give a depth necessary to provide for the wear caused by surface-attrition, with the least possible residuum when surface irregularities entail renewal.

4. Such an arrangement of the surface as would afford the greatest uniformity and smoothness consistent with a *secure foothold* and durability.

I will now endeavour to show how far I consider that Mr. Rawlinson's suggestions meet or fail to meet the above conditions.

1. A sound concrete foundation, as he suggests, is the first requisite; but with a road such as I will describe, fresh-burnt ground lias lime will prove quite as durable as cement, except when laid during very wet weather, and be less costly.

2. The elasticity required by the intervening layer is not that of a mattress, but that of a billiard-ball. Tarred felt does not possess this quality; it is, moreover, liable to admit the passage of surface water at the joints, and is retentive of moisture, thus liable to promote decay in the blocks. Whereas a thin asphalte layer exactly fulfils the conditions of a proper elasticity and of imperviousness. Moreover, it is of such a consistency as to add also to the solidity of the foundation; and, in consequence of its perfect imperviousness, renders a less depth of concrete equally efficient.

3. The surface blocks should be effectually united to each other by keys, cementation, or by both; and, still better, they should also be firmly held down to the bed. The strains from passing loads are thereby distributed over a larger area of foundation, and the stability of the blocks is not dependent solely upon their depth, thus rendering a deep and expensive block necessary, and which must be renewed long before it has become worn down by the traffic. These requirements are met by laying the blocks with a narrow space between each course, the lower half of the spaces being run in with hot asphalte; this also enters auger-holes, which should be bored a short way into the blocks near their base, thus firmly cementing them to each other with an impervious and preservative material, which also holds them securely to the bed, forming with it a firm monolithic slab, extending the whole width of the road, and distributing the strains from passing loads over the largest area of foundation, which is thereby not required to be so thick as when the shocks of the traffic are transmitted through the medium of independent blocks. It is thus also possible to employ the smallest quantity of wood actually necessary to provide a surface for the traffic till it becomes so far worn as to require renewal, blocks so laid remaining firm till they are worn within an inch of their bed: this is impossible in other systems, which depend solely on the depth of the block for solidity. The economy thus effected must yearly become more apparent, as the consumption of the proper kind of timber steadily increases, causing a steady rise in price, as during the last few years.

4. The joints Mr. Rawlinson suggests may produce a quiet and smooth surface, but another most important requisite has to be considered also, viz.,—the maximum safety of foothold consistent with quietness, durability, and uniformity of surface wear. I contend that this is *not* met by the system he advocates, there being no sufficient joint to secure a grip for the horse, the very nature of the material placed between the blocks being such as to produce a greasy exudation, which intensifies the one condition in which a wooden pavement is likely to become slippery. The true solution consists in the adoption of a joint which shall be just sufficiently wide to give a grip to the horse without forming too great a rut in the surface. This was attempted at first by comparatively wide joints packed with gravel or loosely filled with coarse concrete, and failed as regards uniformity of wear. Experience has shown that by reducing the joints and filling the upper portion with coarse cement grout, they will wear uniformly with the wood, and all the above conditions will be met, particularly if the pavement be allowed to remain one or two days after completion before the traffic is turned over it.

5. The quality of the timber is of the first importance, and, as with the width of joints and uniform height of the blocks, was a point which did not receive sufficient attention till recently, though on all of these I have always insisted. The wood should be perfectly free from sap or dead knots, and hard, well-seasoned *red pine*, not *white*, as mentioned by Mr. Rawlinson, the resin contained in red pine being conducive to its preservation, without being so much in excess of its fibrous constituents as to create greasiness; whereas white pine contains less resin, and is less firm in the fibre, therefore more retentive of moisture, and decays more rapidly. In proof of the importance of the class of timber used, I may remark that a piece of pavement laid on the system I have referred to, with red pine blocks only 3½ in. deep, on 4½ in. concrete, with ½ in. layer of asphalte intervening, has now been subject to the heaviest traffic of an important seaport town for six years and a half, and is still in good condition, though no repairs have been made; whereas a road paved on the same system, with 6 in. *white* pine, and subject to much lighter traffic, required re-laying within two years, in consequence of the want of durability in the timber. The above example will also show the waste involved in laying the deep blocks and unnecessarily thick bed of concrete at present so often used. The total depth of material really required on the system I advocate seldom exceeds 8 in., even under heavy and quick traffic, and, indeed, is much less when the traffic is light. In fact, it has been in constant use during the last two years and a half for tramway traffic, with 3½ in. blocks laid in ½ in. of asphalte and 3½ in. of concrete, is still as good as when first laid, and apparently will not require surface renewal for at least another three years. The economy in the original cost of excavation is evident, as also in the subsequent expense of maintenance.

Referring to the letters from your other correspondents, I am not surprised at the anxiety of the people of Norwich, as, from the description of their pavement, it does not possess one quality conducive to durability. Similar pavement has been laid in England at intervals during the last forty years, and largely in America, but has always failed, and, though cheap at first, will prove excessively costly and inconvenient to maintain. I can only feel surprised that the Local Government Board should have sanctioned such an outlay, if they had been fully informed as to the nature of the pavement to be laid.

The only way to insure economy is to work upon the principles I have indicated, reducing the depths of blocks, &c., in proportion to the traffic, and so constructing the roadway as to confine the wear practically to the surface material. By that means, though the first cost may be in excess of that named by Mr. Marshall, such a reduction may be made in the present extravagant use of timber as would reduce the original outlay to the minimum consistent with durability, and materially diminish the cost and inconvenience of maintenance.

HENRY S. COPLAND, C.E.

FIREPROOF CURTAINS FOR THEATRES.

SIR,—Noting that you have ventilated the subject of fireproof curtains for theatres in your pages, I beg to mention that the system advocated by Herr Pfaff, as set forth by you, for raising and lowering the same by hydraulic means, coincides in a great measure with the system I have for some time advocated with persons interested,—that portion of the arrangement dependent upon the supply of water from the main excepted. I use a small accumulator, which not only acts as a counterbalance for raising the curtain, but is ready at any time, without depending on the main supply, and by my arrangement any number of small outlet valves, with levers attached, can be placed in various parts of the house, or even in the public thoroughfare itself, for the purpose of lowering the curtain in the event of fire occurring in an inaccessible position for obtaining access to any of the valves within the building.

The enormous weight of ironwork contained in the framing, water-girders, columns, curtain, and counterbalanced weights in Herr Pfaff's arrangement would be, in the case of a stage

say 30 ft. by 30 ft., a very serious matter in itself, without taking into consideration the drawback of the expansion of iron by heat, which is likely to cause the curtain or screen to stick fast in the grooves.

I advocate a double curtain made on the principle of a Venetian blind, the material being attached to the tapes on each side, the length of the laths forming the width of the curtain, the ends working up iron grooves built in the brickwork, the material and laths being prepared in a fireproof solution, or preferably the former made of woven asbestos, and the laths, after preparation, painted with asbestos paint as a further safeguard. A double curtain of this description weighs only about half a ton.

Two water-mains, perforated their entire length, are fixed one on each side of the cords at the top under the supporting lath or girder, carrying the curtain upon this lath the jets play upwards, the water being projected from thence on to the top of the two inner sides of the curtain material, which it keeps thoroughly saturated. The descent of the water, except when in a stream down the curtain, is partially arrested by the formation of the curtain-laths, which compel it to do its duty by causing it to be continually projected against the sides in the event of its running off the surface before it reaches the bottom.

The jets are brought into play simultaneously with lowering the curtain, held in position at the sides by wire-ropes up which the laths, and consequently the curtain, slide in the grooves.

Many minor points of detail could be mentioned, such as spring cushions for the ends of the bottom lath to fall upon in case the curtain should be lowered too suddenly. Gutters can be built in the brick piers to run off the surplus water after it has done its work, and to prevent damage in the event of a false alarm, fire drill, &c.; although for fire drill the levers of the valves on the water-main may be disconnected from the lowering apparatus.

There are no complicated water-columns, girders, or heavy framing, as in Herr Pfaff's arrangement. The top supporting lath or girder contains the runners for the cords to pass over, and is fixed to and rests upon the brick piers usually built on the stage side of the proscenium, supported at intervals and cased in with stout sheet iron. The curtain grooves are also formed in the piers mentioned. In consequence of the curtain being double an increased panic amongst the audience would be prevented when it is down, as smoke, or the rays of light from fire are prevented from penetrating through wet double material. JOHN H. TYLER.

LYCIAN REMAINS.

ABOUT forty years ago, Herr Schönborn, a German traveller, paid a visit to Asia Minor, and spent some time in that part of the south-west of the Peninsula which, in ancient times, was called Lycia. Upon a hill, 3,000 ft. high, near Hekova Bay, he succeeded in discovering, among the ruins of an ancient city, the remains of a large edifice, which was profusely decorated with reliefs. In the middle of this structure he found the remains of a colossal sarcophagus. The discovery had been practically forgotten until, two years ago, the spot was visited by Dr. Benndorf, Professor of Archæology at Vienna University, who found the remains just as they were described by the earlier traveller. The edifice, with the sarcophagus, was declared by Dr. Benndorf to be the tomb of an ancient Lycian mountain prince. The walls he found covered with an exceedingly interesting series of reliefs of a mythological nature. They formed a double frieze of 90 mètres in length, and were 4 ft. high. They are estimated by Professor Benndorf to belong to the fourth century before Christ. Upon these facts becoming known in Vienna, a number of gentlemen came together and succeeded in collecting sufficient funds to purchase and bring these interesting remains of ancient art to the Austrian capital. The Emperor Francis Joseph, on hearing of the matter, approved of the design, and rendered all assistance in his power towards realising it. By the intervention of the Austrian Ambassador in Constantinople, a firman was obtained from the Sultan empowering the promoters of the undertaking to take possession of the remains, with a view to bringing them to Vienna. It has, therefore, been resolved to fit out an expedition under Professor Benndorf, who will proceed as soon as possible to Lycia to secure these treasures for Austria. The Emperor has given his permission for the reliefs and other remains, when they arrive, to be permanently placed in the Court Museum of Historical Art.

GROWTH OF THE AMERICAN RAILWAY SYSTEM.

THE growth of the railway system of the United States is one of the most remarkable items in the entire field of industrial statistics. The 8th of October, 1829, may be called the birthday of the railway system, as having been the day on which the locomotive trials were commenced at Rain Hill, on the Liverpool and Manchester railway. The earliest year for which we have official returns of the length of English railways is 1854, at the close of which 8,053 miles of line had been completed in the United Kingdom. In 1830 twenty-three miles of railway were open in the United States. By the end of 1840, 2,818 miles were open. In 1850 the length rose to 9,021. In 1854 it was a little more than double the length of English lines, being 16,720 miles. By 1860 the aggregate rose to 30,635 miles against 10,433 in the United Kingdom. In 1870, the respective lengths were 52,914 and 15,537, and at the end of 1879, 82,223 and 17,696 miles respectively. The total length of the railroads of the United States at the close of 1880, including some lines which do not report their earnings, was 93,671 miles.

It thus appears that if we compare the growth of the railway system since 1854 in the United Kingdom and in the United States, there has been a steady increase in the former at about the rate of 3 per cent., and in the latter at about that of 4¼ per cent. per annum. But when we consider, not length of line alone, but length and cost together, the contrast is more remarkable. The lowest cost per mile of an average English railway is that shown by the returns for 1866, in which year the cost per mile of line open was 32,804*l*. From that date the cost of the railways of the United Kingdom has steadily increased, till, in 1880, they have cost 40,613*l*. per mile open. The American railways, on the contrary, have decreased their costliness, the average cost of a mile open in 1871 being nearly 12,000*l*., and in 1880 only about 11,600*l*. The total capital returned as expended in 1880 was 979,500,000*l*. in the United States, and 802,000,000*l*. in the United Kingdom. The average gross earnings of the American lines was 1,460*l*. per mile, of which 41·4 per cent. was net revenue. The United Kingdom lines averaged nearly 3,700*l*. per mile of gross earnings, of which between 48 and 49 per cent. was net revenue. Thus the American lines cleared a dividend all round of 5·2 per cent., against 4·04 per cent. on the English lines.

The total length of railways in the world at the commencement of 1880 was calculated at:—

	Miles.
Europe	102,593
Asia	8,983
Africa	3,024
America	100,867
Australia	4,338
Total	219,805

SWISS HOTELS.

SWITZERLAND, long the most favourite resort of tourists from all parts of Europe, is celebrated above all Continental countries for its hotels. The architect in his Alpine tour may there see the Continental hotel system in its most improved form. In the year 1883 it is intended to hold a National Swiss Exhibition; and one of the groups (No. 41) will be devoted entirely to illustrating the hotel system of Switzerland. There will be exhibited plans and models of all the most important hotels of the country, together with photographic views of the exterior, and the surrounding grounds, and the chief apartments of the interior. There will also be maps showing the position of each establishment. The different portions of this Group of Objects in next year's exhibition will comprise:—(1) Diagrams showing the increase of visitors from abroad and their influence on the hotel system of Switzerland; (2) representations of different classes of hotels from those of the first rank down to the most primitive village inns; (3) the internal arrangements of the different classes of hotels and inns; (4) illustrations of special arrangements and appliances, like baths, steam-engines, water supply, and heating apparatus; (5) "*Cur*" establishments or hotels for invalids with their special peculiarities; (6) illustrations of the grounds, parks, and gardens attached to hotels; (7) climate; (8) statistics of all establishments in Switzerland used mainly by foreign visitors.

THE LATE R. R. ARNTZ, ARCHITECT.

ON the 17th of February last, at the age of sixty-six, Robert Richard Arntz gave up his work, and in his case it is no figure of speech, for he was at work up to within a fortnight of his death; then severe illness seized him, from which he never recovered. A stronger man might, in all probability, have weathered the attack, but it came upon a frame which had lately taken no rest or relaxation. Mr. Arntz was possessed of a singularly clear judgment, and as a surveyor was in the foremost rank; of a most retiring disposition, never asserting himself for his own benefit. He is, perhaps, not so widely-known as some other men of less real ability, but to those who did know him, the truth of this remark will be apparent. Fair, upright, and truthful, employers and employed who knew him in business will ever respect the memory of a man who fearlessly strove faithfully to fulfil his duty in the sphere in which he was placed.

Mr. Arntz held the post of Surveyor to the Westminster Board of Works for some forty years, including the time before it took the title it now holds. To this work he devoted generally half of each working day, and it would be impossible to speak in too high terms of the way in which his duties to the Board were discharged.

Mr. Arntz's chief architectural works were the United Westminster Schools, a plain building architecturally, but well adapted for its purpose, showing thought and careful consideration throughout. The United Westminster Almshouses, now in course of erection in Rochester-row, Westminster, are also his, a more ornate group of buildings than the last-mentioned.

Mr. Arntz was elected a member of the Institution of Civil Engineers on Feb. 5th, 1856, and at one time was frequent in his attendance at the meetings of that body. He was elected a Fellow of the Society of Antiquaries on December 11th, 1862; and was also a member of the National Association for the Promotion of Social Science.

THE LATE MR. HEATON.

WE have, with much regret, to record the death of Mr. Clement Heaton, the senior partner in the firm of Heaton, Butler, & Bayne, the well-known artists in stained glass and church decoration.

Mr. Heaton had an extensive knowledge of nature, and the skill to apply it to decorative art. He was always anxious to do good and honest work, and among other important matters on which he was engaged may be mentioned the extensive decorative work at the Rochdale Town-hall, Manchester Town-hall, the Merchant Venturers' Hall, Bristol, the Chapel of Trinity College, Cambridge, and the English Chapel at St. Petersburg. The last work on which he was engaged was the decoration of Eaton Hall, Chester, under the superintendence of Mr. Waterhouse, for his Grace the Duke of Westminster. The funeral took place at Watford on March 1st. There was a very large attendance of relatives and friends. Among those present were Mr. A. W. Blomfield, M.A.; Mr. Alfred Waterhouse, A.R.A.; Mr. John Lee; the partners of the firm; and a large number of *employés*.

Smoke Abatement.—The Gas Institute, after their meeting at the Crystal Palace last week, visited South Kensington, where the gas-fired bakers' oven and gas-pottery kiln have been kept in operation for a series of practical tests. A large deputation of the Master-Bakers' Association paid a second visit, and took part in trials of bread-baking, which were considered satisfactory. Messrs. Huntley & Palmer were represented at the trials by Mr. Alfred Palmer. The application for space at the Manchester Exhibition, which will open on the 14th inst., have been very numerous. Gas-engines, of higher power than any hitherto used in England, will be among the new exhibits.

DEPOSIT OF PARLIAMENTARY PLANS WITH LOCAL AUTHORITIES.

AT a recent meeting of the West Ham Local Board, Mr. Lewis Angell, C.E., called attention to the inconvenience of the antiquated Standing Order of Parliament requiring the deposit of railway and other plans in November with the "Parish Clerk," whereas such deposits should now be made with the Local Board or other authority whose duty it is to to take cognisance of such matters. In accordance with this suggestion, Col. Makins, M.P. for South Essex, has prepared an amendment to Standing Order, No. 29, which has been accepted by the Chairman of Committees and the Local Government Board, to take effect at the end of the present session, after which Parliamentary plans affecting any district will have to be deposited with the Local Authority.

ARCHITECTS' BENEVOLENT SOCIETY.

THE thirty-second annual meeting of this Society was held on Wednesday afternoon, in the meeting-room of the Royal Institute of British Architects, No. 9, Conduit-street, Mr. John Whichcord, F.S.A., President, in the chair.

The annual report stated that the modifications sanctioned by the last annual general meeting of donors and subscribers have greatly facilitated the conduct of the Society's affairs. The number of cases relieved during the year 1881 was 30, and the grants made amounted to 381*l.* These cases included applications from Scotland and distant parts of England, as well as from the metropolis. The Council have to deplore the decease during the past year of several contributors to the Society's funds. Three well-known men,—Mr. Decimus Burton, Mr. Anthony Salvin, and Mr. G. E. Street,—passed away in December last, all of whom evinced great interest in the proceedings of the Society. With societies, as with individuals, the loss of one's earliest friends is attended with the keenest regrets, for they leave a void behind them which cannot be fully replaced. The lamented death of Mr. Street has caused a vacancy in the number of trustees, to fill up which the Council have nominated Mr. George Godwin. The income account and balance-sheet for the year ended December 31, 1881, have been duly audited by Mr. J. Henry Christian. A then slight indisposition prevented Mr. Arntz from meeting his brother-auditor on the occasion of the audit, and his subsequent death has rendered it impossible to obtain the signatures of both the auditors. The Council, however, trust that under the circumstances the annual general meeting will be satisfied with the careful examination made by Mr. Christian of the Society's accounts. The donations received during the year 1881 were invested in January, and the amount of invested capital has now reached the sum of 5,550*l.* New Three Per Cent. Stock. With reference to the expenses, the sum expended in 1880 was 50*l.*, while in 1881 it was 39*l.*, making a reduction of 11*l.*, and this in spite of the fact that the printing of new By-laws, and lists of donors and subscribers, involved an outlay of more than 25*l.*

The Council cannot but recognise with feelings of satisfaction the liberal aid and assistance already bestowed by the comparatively few members who continue contributors to the Society; but deem it necessary to remark that the available funds for distribution are quite unworthy of the character and position of the profession, and inadequate to meet the increasing claims pressing for assistance with that relief which, in numerous cases, ought to be granted. The Council are not without a well-founded hope that the Society will annually be more and more generally recognised by the large body of the profession, and especially by the very large accession of gentlemen who have recently been elected as Fellows and Associates of the Royal Institute of British Architects. The Institute now numbers more than a thousand professional members, not a fourth of whom contribute to the Society's funds. The Council in all kindness earnestly solicit their influence and support for the Society, which it is essential to the interest and respectability of the profession to maintain on a sound and permanent basis to effectually carry out its charitable objects. To administer relief and consolation is at once the privilege and duty of all in the profession who are so far fortunate as to be blessed with the means of doing so, remembering always that "without charity we are nothing worth."

The balance-sheet showed the receipts for the year to be 478*l.* 13*s.* 10*d.*, including 13*l.* 9*s.* 9*d.* brought forward from last year; 159*l.* 17*s.* 1*d.* dividends on stock; and subscriptions 305*l.* 7*s.* The disbursements amounted to 460*l.* 18*s.* 5*d.*, including 40*l.* for two pensions; 381*l.* paid to applicants for relief; and 39*l.* 18*s.* 5*d.* paid for working expenses; leaving a balance of 17*l.* 15*s.* 5*d.* to be carried forward.

The Chairman, in moving the adoption of the report and balance-sheet, and the election of a new trustee in the room of the late Mr. Street, emphasised the words of the report as to the necessity of increased support to the Society from the members of the Institute.

Mr. Mocatta, in seconding the motion, said that while he should be very glad to see a much larger number of subscribers, he looked with great satisfaction upon the augmentation which had been made during the last year or two in the funded property of the Society,—an augmentation largely due to the initiative of Mr. Godwin, seconded by the efforts of the late Mr. Thomas Wyatt.

The motion was adopted, and Messrs. James Williams (of H.M. Office of Works), T. M. Rickman, F. W. Porter, Edwin Nash, and Joseph Peacock were elected members of Council in the room of Messrs. Ewan Christian, T. Hayter Lewis, A. W. Blomfield, J. P. St. Aubyn, and W. A. Boulnois. Messrs. Lewis Solomon and William Hudson were elected auditors for the ensuing year.

WATER POWER IN THE PUNJAB.

THE Secretary of State for India in Council invites us to give publicity to the fact that a paper recently published in the *Gazette of India* sets forth the terms on which leases of water-power are now available on the canals in the Punjab.

Raw material in the shape of cotton, wool, hides, hemp, &c., are to be found in abundance in the Punjab; there is also a population sufficient to supply the labour required for factory operations; but the scarcity and dearness of fuel are such that it is almost impossible to make a manufactory remunerative in any case where steam-power is necessary for its working. Wood costs about Rs. 30 per 100 maunds; coal about Rs. 1. 8 per maund at Amritsar, and 14 annas a maund at Delhi; so that the cost of working a 100-horse-power steam-engine would be about Rs. 150 per diem, while a water-wheel of similar power would cost only about Rs. 5 per diem.

The localities where this vast water-power is available are named.

The standard for the calculation of 1-horse-power is assumed at 15 cubic feet per second falling through 1 ft., as 8·8 cubic feet per second falling through 1 ft. constitutes a theoretical horse-power; there is thus ample margin allowed for the effective working of the machines.

The Government are prepared to grant the use of the water for working machinery for periods not exceeding twenty years on the terms shown below:—

Approximate Rates per Horse-power per Annum.	Rs.
For the first three years	*Nil.*
For the second five years	60
For the third six years	100
For the fourth six years	160

Good results should follow these arrangements.

PREVENTION OF FADING IN SHOP WINDOWS.

THE Swiss *Gewerbe Blatt* recommends a remedy for an evil which drapers and many other shopkeepers have long experienced, namely, the fading or bleaching of many kinds of coloured articles when exposed in the shop-windows. The authority quoted says that this fading or bleaching is brought about only by the white rays of the sun's light, and, where it occurs, it shows that the glass is more or less perfectly colourless. It is found that if, instead of such colourless glass, the window-panes consist of glass which is slightly yellow, the bleaching or fading process is prevented. Where the glass is colourless and cannot be replaced by slightly yellowish tinted glass, the desired effect may, it is said, be produced by simply giving the panes a coating of copal varnish.

Chimney-pieces and Stoves.—Messrs. Ashton & Green have just now issued an illustrated price-list, containing a large number of designs for chimneypieces of moderate cost, some of them coloured to show the varieties of marble employed in their construction. Illustrations and prices of a large number of grates are also given.

UNDERGROUND ROOMS.

SIR,—Your correspondent, "G. M. D.," evidently fails to recognise the very essential difference between "rooms" occupied by and let separately to different occupiers, and those wholly in one occupation, and I differ with him *toto cœlo* in his construction of the Act. My belief is that the Legislature had specially recognised the different mode of treatment, and provided for the same.

He surely would not wish to prevent butlers in Grosvenor-square or Park-lane sleeping in the basements, of which they are the regular custodians and guardians, and multiply useless legislation for no practical end.

The more basements are disfranchised the more the worse evil of overcrowding in upper floors will take place. The problem of the day is how to house the poorer classes, not to render the present small accommodation smaller.

I need hardly say how entirely impracticable it is for district surveyors to perform police duties and see how such rooms are occupied at night. It is one for the local authorities and their sanitary inspectors to deal with.

A DISTRICT SURVEYOR.

TREATMENT OF BUILDERS.

SIR,—I venture to call your attention to the following facts, feeling sure that your sense of justice will cause you to give publicity to it.

In common with several firms I submitted a tender (in accordance with an advertisement in your paper of the 11th ult.) for a proposed firework factory at Mitcham, under a firm of architects in Parliament-street. At the time arranged (Monday, 20th, three o'clock) tenders were received and opened by the architect from eleven firms, and the result was announced in this way:—

"Gentlemen, the highest is 560*l.*, the lowest 313*l.* I will consult my client, and communicate with the lowest." After a demur on the part of the competitors, the tenders were read, as follow:—

Barnes	£560	0	0
Cooke	440	0	0
Marsland	435	0	0
Ennor	425	0	0
Holloway	384	0	0
Battley	340	0	0
Burch	375	0	0
Smith & Bulled	375	0	0
Capsey	370	0	0
Tuttle & Co.	345	0	0
Page	313	0	0

On reading the list published by you (p. 240), I find thirteen names, one of which, at 345*l.*, is accepted, but an addition is mentioned of 30*l.* for red bricks, which were never mentioned in the specification. The facts are brief and speak for themselves. But while admitting the perfect right of an architect in a public or private competition to recommend any man for acceptance, the addition of a tender after public opening can only convey one impression to the minds of those who sent in at the right time.

ONE ANNOYED.

THE INVASION OF ANTS.

SIR,—I have tested the remedy (plaster of Paris and sugar) as recommended by "Watford, Herts," but I could not get the ants to "make one meal of it." They walked over it with the most sovereign contempt. I have not ventured to try the arsenical mixture, because I fear that my household have not quite such lively instincts as the ants, and a mistake might occur, as is so frequently the case when "there is poison about."

F. S. A.

VARIORUM.

WE spoke not long since of the appearance of a new edition of "The Imperial Dictionary," revised by Chas. Annandale, M.A., and published by Blackie & Son, Old Bailey, &c. We need now simply mention that the second volume has been issued ranging from "Departure" to "Kythe." We wonder, by the way, how many readers in a hundred know what that word means.* ——Part 10 of "English Etchings (W. Reeves) includes a view of the obelisk on the Embankment, with the sphinxes placed not as they are, but as they ought to be. "The Shimmering Sea," in the same number, is worth the cost of the part.——We wish to introduce a novel to our readers: a "A Laodicean; or, the Castle of the Stancys," by Thos. Hardy; published by Sampson Low & Co. "What next," says Straitlace; "I do not look to my *Builder* for notices of novels." Very likely not. But there are novels *and* novels, and when we find one, as in this case, dealing with the life of an architect and written by an archi-

* Kythe, *v. i.* to appear; to be manifest (Old English and Scotch). "It *kythes* bright."—*Sir W. Scott.*

tect, it seems quite right that we should give it a word. The whole story grows out of a sketching tour, and is very interesting. It is agreeable to us to find Mr. Hardy speaking of the *Builder* as "the familiar periodical from which, in my days of pupilage, I gained so much that was of use to me in the profession I had then entered upon." Mr. Hardy, it will be remembered, is the author of "Far from the Madding Crowd," in connexion with which he seems to have been used somewhat ungenerously by a contemporary dramatist.

Miscellanea.

The Artisans' Dwellings Act.—The Committee of the House of Commons appointed to inquire into the operations of the Artisans' Dwellings Act sat at Westminster on Tuesday afternoon, Sir Richard Cross presiding. Sir Henry Hunt, consulting surveyor to Her Majesty's Office of Works, and arbitrator under the Artisans' Dwellings Act of 1875, said he had acted in fifteen cases,—eight in the metropolis and seven in the provinces. He considered that the Act had worked most beneficially in the public interest by clearing away unhealthy areas. This had no doubt been done at considerable cost to the ratepayers, but great expense was inevitable in such matters. At the same time, he was of opinion that the machinery of the Act was too cumbersome, too dilatory, and too expensive; and he ventured to suggest a simpler and more summary course of action. He recommended to the Committee the operation of the Post Office Land Act passed last session, which gave the Postmaster-General power to acquire any property by giving three months' notice to the occupiers, application to Parliament being avoided. He gave the Committee information as to the demand that existed for small property, such as that to be found in Petticoat-lane, London. It frequently occurred that as much as 5*l.* was paid by tradesmen to get tenants out of their premises,—a sort of tenant-right being thus established.

Application of Stored-up Power.—On Saturday afternoon last there was (according to the *Daily News*) a successful demonstration of the application of stored-up power to the propulsion of a tramway-car. The experiment was tried on the line of rails connecting the North Metropolitan Tramway Company's carriage-works with the company's lines. The car was an open one, of Continental make. Enclosed under the seats and behind them, along the sides of the car, was a large number of Faure's improved accumulators, which had been previously charged from a dynamo-machine at the Tramway Company's works. These accumulators were connected with a dynamo-machine underneath the car, the motion of which was communicated to the wheels of the car by a cog-wheel arrangement. Connexion was established and broken by the simple movement of a switch. Thus, with the simplest possible movement, the stored-up force was reconverted from electricity into motive power, and the car moved off at a speed which was easily regulated; for, according to the distance the switch was moved, the driver could run his car with a supply of force from a greater or less number of accumulators at his pleasure. The weight added to the car by the accumulators was a ton and a half. The force said to be stored in them was equivalent to 25-horse-power for one hour, or 1-horse-power for twenty-five hours. It is claimed by Mr. Radcliffe Ward, who was conducting the experiment, that this method of propelling conveyances has an enormous advantrge over others in point of economy, while its noiselessness and freedom from the nuisances of smoke or steam are obvious recommendations.

The Sunday Society.—Arrangements have been made for holding an evening party in furtherance of this Society, which has for its object to obtain the opening of museums, art galleries, libraries, and gardens on Sundays, similar to those which gave satisfaction in previous years. The party will be held at the Freemasons' Hall, on Wednesday, March 29th, and will, as before, be confined to the members of the Society and their immediate friends. The proceedings will commence with addresses in support of the objects of the Society, under the presidency of Mr. Thomas Burt, M.P., after which musical selections for promenade and dancing will be given by Mr. Dan Godfrey's band.

The Highest Railway Bridge in the World is, or will be (of course) in America. On the top of the Alleghany Mountains, at the point where the Bradford extension of the Erie Railway is to pass, is "a slight impediment" in the shape of a ravine 300 ft. deep. The chief engineer of the Erie, Mr. Chanute, has exhibited to a reporter of the *New York Herald* his plans for getting over this impediment. For some time it has delayed a railroad connexion between that section and Pittsburg. It is virtually a valley, running lengthwise the mountain range, whose walls are 2,200 ft. above the level of the sea, and whose bottom is washed by the waters of the Kinzua Creek. In some places the depth of the valley is 700 ft. and 300 ft. was about the first favourable crossing-point that could be found. Work was begun last fall upon a structure which, when completed, will be the highest railway-bridge in the world. The length of the bridge will be over 2,000 ft., that distance to be covered with twenty-two piers of iron and twenty-three spans. Two low stone piers will underlie each iron one, the total masonry-work amounting to 2,200 cubic yards. The length of the piers will be 40 ft., and the length of the spans 60 ft. The piers will be 110 ft. wide at the base, tapering gradually up to a width of 12 ft. at the top. The firm of Clark, Reaves, & Co., of Phœnixville, Pa., are the contractors for the ironwork. They expect to complete the structure by about June 1st. Its total cost will be about $300,000. Both Mr. Chanute and Mr. Clark agreed that there was no railway-bridge in the world of so great height as this would be. The Kentucky River Bridge is 276 ft. high, the Great Peruvian Railway-bridge is 235 ft., the Portage Bridge on the Erie's main line is 234 ft., and the Niagara Suspension Bridge is 275 ft.

Rawtenstall.—A large five-light window has been fixed this week in St. Mary's Church, Rawtenstall, near Manchester, the gift of Mr. Worswick, of Greenbank, in memory of the late Mr. Henry Ashworth and his sister. The three centre lights are treated as one composition, showing our Lord as the healer. Round our Lord, who occupies the centre light, are grouped the maimed, the lame, the blind, and the sick. At the head of the centre opening, forming part of the canopy, grouped and entwined with it, is a votive angel, bearing a scroll, with the legend: "Blessed are the Dead"; while the pelican tearing its breast to feed its young occupies the base of the centre light, emblematic of Christ dying for the Church. The other two lights are occupied respectively by the subjects of Christ raising from the Dead the Widow's Son at Nain, and Mary sitting at the Feet of Jesus, while He half rebukes Martha for saying: "Mary hath chosen that good part." The window is painted in a rich full key, and is from the studio of Messrs. I. A. Gibbs & Howard, of London.

The Cathedral Close at Norwich.—The Dean of Norwich writes to call attention to the fact that the Lynn and Fakenham Railway Company have a Bill now in Parliament awaiting its second reading, the effect of which will be to pass a line of railway through the Cathedral Close at Norwich, cutting off the margin of the Close which is skirted by the river Wensum (and within which margin is embraced a very curious and interesting relic of antiquity), ejecting from their quiet homes several citizens who have retired to the Close for privacy and seclusion, and curtailing one of those few open spaces which are now thought so essential for the health and recreation of the inhabitants of our great towns. Dean Goulburn states that the invasion of a Cathedral Close by a line of railway is a new and hitherto unheard-of thing.

A New Synagogue.—On Sunday last the memorial stone of a new synagogue in course of erection in Abbey-street, St. John's Wood, was laid by Mr. Lionel L. Cohen. The synagogue is being erected by Messrs. Kirk & Randall, from the designs of Mr. H. H. Collins. The style of architecture is Italian, with Byzantine feeling. The materials are red brick, with Dumfries red stone dressings. The cost, including site, minister's house, &c., will exceed 12,000*l.* The building will accommodate 500 worshippers.

St. Pancras.—Provision is being made for an additional outdoor-relief station for this parish in Charles-street, Somers-town, by converting two houses and certain additions. Messrs. Steed's tender has been accepted. Mr. Bridgman is the architect.

Building Land at Hendon.—The National Standard Land Society, under the conduct of Mr. Richard J. Collier, held their first sale of freehold building land last month at the Midland Hotel, Hendon. The Midland Railway Company had, just before the sale, purchased twenty-seven lots, which abut on their line, leaving fifty-three lots to fall under the hammer out of the eighty advertised. After some preliminary remarks, bidding commenced for lot 1, a freehold corner shop plot, having a frontage to the Edgware-road of 27 ft. 6 in., by return frontage to Gutter's Hedge-lane of 85 ft., which was slowly run up to 99*l.*, at which price it was sold. All the lots up to twenty-seven were marked out as shop plots (with the exception of lot 23, which was reserved for a public-house plot). The frontages were generally 20 ft., by depths varying from 87 ft. to 112 ft., and averaged 90*l.* per plot. The public-house plot sold for 275*l.* The remainder being smaller plots for the erection of residences, had frontages of 17 ft., by depths of from 80 ft. to 90 ft., and were sold at from 45*l.* to 70*l.* per plot. The total sum realised at the sale amounted to 4,002*l.* The amount of the railway company's purchase was 1,800*l.* Previously to the sale commencing, Mr. Collier drew attention to the principle upon which he conducts his sales with regard to the nine years' payments. If before the expiration of the time the principal is paid, interest ceases with the last instalment.

Dangerous Steps.—On Wednesday last the Coroner for Central Middlesex held an inquest at the St. Pancras Coroner's Court, as to the death of Edward Goddard, aged 26, a fret-cutter, of 263, Great College-street, Camden Town. On Saturday week the deceased, who was in the employ of Mr. Jennings, on descending some steps from an upper workshop, where there was no handrail, suddenly slipped, and fell to the bottom on his head. He was so seriously injured that his father took him in a cab to University College Hospital, where he received but little attention. Dr. Batt deposed that the death was from concussion of the brain, caused by the fall. It was a proper case for treatment in the hospital. The foreman of the jury said he saw the deceased, and considered it a shameful thing that he was not admitted. In returning a verdict of "Accidental Death," the jury called the attention of the district surveyor to the dangerous state of the steps, and expressed their regret that the deceased was not admitted to the hospital at once. It is by no means certain that the district surveyor would have any power in the matter.

The Fitz Recreation Ground, Keswick. A week or two ago we mentioned this project for securing twenty-seven acres of land at Keswick, for use as a public recreation-ground. The success of the project is now assured, thanks to the munificence of the Hewetson family. Messrs. Thomas & Henry Hewetson have each raised their promised subscriptions from 1,000*l.* to 1,700*l.*, making a total of 3,400*l.* Mr. John Hewetson gives 100*l.*, and the Misses Jane, Elizabeth, Mary, Hannah, and Emma Hewetson 100*l.* each, making a grand total of 4,000*l.* This liberality will render the execution of the project a light matter, financially, to the local residents.

Builder's Claim.—In a reference as to a mansion for the Rev. T. L. Griffith, at Pen-y-nant, by contract, schedule of prices, and day-work, the umpire, Mr. Banister Fletcher, held his final sitting at Westminster Palace Hotel on Saturday last. The total claim is 17,564*l.* 11*s.* 10*d.*, and the plaintiff claims a balance of 3,504*l.* 17*s.*, while the defendant's contention is that the plaintiff is overpaid to the value of 288*l.* 12*s.* 6*d.* The counsel engaged were Mr. T. H. Wheeler and Mr. A. Yates; the plaintiff's London solicitors being Messrs. Smith, Fawdon, & Low, and the defendant's London solicitors being Messrs. Prior, Bigg, Church, and Adams.

Knapton.—Mr. G. Gilbert Scott has made a report on the condition of the fine old church at Knapton, Norwich, which is sadly in need of substantial repairs, daylight being visible through the roof in several places. A restoration committee has been formed, and among other improvements will be the substitution of open benches for the present ugly pews. The roof is a fine example of the double hammer-beam construction, and retains great part of its original coloured decoration.

Kidderminster School Board.—Out of eight designs submitted in competition for Lea-street schools, the Board at the last meeting selected the design by Mr. J. M. Gething, architect, Kidderminster and Stourbridge.

Safety in Theatres.—At Hooley's Theatre, in Chicago, an experiment was made the other day to determine the efficacy of ventilators over the stage for keeping the flames of a conflagration behind the proscenium arch from issuing into the auditorium. The *American Architect* says,—In the presence of several fire engineers, members of city committees and others, half a dozen stoves, filled with rags dipped in turpentine, wet shavings, and other combustibles, were lighted, and allowed to burn for several minutes. When the stage was well filled with smoke, a ventilator, formed by a round shaft, 8 ft. in diameter, and carried up 20 ft. above the roof, was opened by pulling the wire-rope which controlled a valve in it, and in less than a minute the smoke was completely cleared away. The curtain separating the stage from the auditorium was partly lowered during the trial, which certainly affords evidence of the value of such an arrangement in protecting the audience in case of a fire on the stage. To give assurance of effective operations in case of actual need, the experiment ought, however, to be repeated while the gas is lighted all through the house, and the regular ventilating-apparatus of that portion in full operation. With anything like the thorough ventilation now usual in the best theatres, the upward draught from the space in front of the curtain would during a performance be very powerful, enough so, perhaps, to counteract, or even reverse, the current through the stage-ventilator. This would, if once ascertained, be easily remedied; perhaps by the device suggested some time ago, of having the air-currents from all parts of the house drawn toward the stage, to issue together from the ventilator over it.

A Roman Villa.—A paper by Mr. Cecil Brent, F.S.A., was read on the 1st inst. at the British Archæological Association, the Rev. S. M. Mayhew presiding, upon a "Roman Villa, recently discovered at Methwold, near Brandon, Norfolk," at a spot known as Little Holmes, and sketches were exhibited of specimens of the tiles, which are very numerous, and of fragments of an amphora, together with the plan of the parish, with the site of the excavations marked upon it. The parish preserves a great deal of the old Roman nomenclature. It lies near the Roman fossway, but outside the Roman line of demarcation, a fact which gives some interest to the discovery of Roman remains on this site. It is also worthy of note that a spot rising only about 4 ft. above the fen level should have been chosen at that early date for a residence. This ancient building was placed in a corner, formed by the confluence of the String dyke and Haggard's dyke. For years large numbers of tiles have been turned up on the mound of which the Little Holmes is composed, the level of the pavement of the Roman house lying within reach of the ploughshare. The foundations are placed immediately on the subsoil of sand, and are of great hardness and solidity, built in alternate bands of flint rubble and the grey fine-grained Northamptonshire flag-stone. One chamber is apparently an apodyterium; it has a floor of solid masonry, intersected by flues 15 in. wide.

Extension of Ironworks in South Staffordshire.—Four years ago Mr. John Lysaght, proprietor of the St. Vincent's Galvanised Ironworks, Bristol, purchased the Swan Garden portion of the ironworks at Wolverhampton, carried on for many years by the late firm of G. B. Thorneycroft & Co. After putting the same in repair, and making very considerable alterations and additions, they were started for the purpose of supplying the works at Bristol with sheet-iron of a superior quality and finish. There resulted such an increase in the demand for the "Orb" galvanised sheets, that it became necessary, in order to meet that demand, to increase the number of sheet mills from seven to eleven. For this purpose additional new plant has been put down during the last nine months, and has recently been most successfully started to work.

Portsmouth Drainage Competition.—Objections reach us against the permission given by the Corporation of Portsmouth to their own surveyor to compete, on the ground that he must be in possession of information and advantages not possessed by outsiders. It is said, and it seems to us with justice, if the Corporation have full confidence in their surveyor, let him be entrusted with the preparation of the scheme; but it is not fair, merely to assure themselves that he is a competent man, to induce a number of independent engineers to waste time, thought, and money, for that purpose.

Books.—In the interest of our younger readers we point out that a portion of the library of the late Mr. William Burges, A.R.A., will be sold by Messrs. Puttick & Simpson at their rooms in Leicester-square, on Monday, the 20th. The books are such as every architect needs.

TENDERS

For road and sewers on the South Acton Estate of the National Liberal Land Company:—

Ambrose Oliver, Brighton	£743 0 0!
James Bloomfield, Tottenham	525 0 0
Dyer & Hunt ley, Loughborough Junction	515 0 0
William Harris, Camberwell	500 0 0
Philip Giles Pound, Bow-road	499 0 0
Matthew William Rowles, Acton	495 0 0
George Impey, Leytonstone	489 10 0
William Herbert Wheeler, Hammersmith	476 10 0
W. Carter, Anerley	479 0 0
James Pizzey, Hornsey	469 0 0
William Nicholls, Woodgreen	431 0 0
John E. Baxter, Walham-green	410 0 0
William Armstrong, Chiswick	400 0 0
Cornelius Lyons, Wandsworth*	399 15 0!

* Accepted subject to references being satisfactory.

For sewering, draining, and forming Cross-street, Back Belton-road, Back Granville, Back Fereday, and Back Whitehead streets, Walkden District. Quantities supplied by the engineer, Mr. John Price:—

J. Unsworth, Walkden	£374 3 7
J. Jackson, Walkden	268 3 0
J. Oaks, Kearsley	267 17 1
Charles Harris, Harewood	258 19 2
G. Unsworth, Moss Side	253 10 3
Snape & Sons, Eccles	243 6 1
Wm. Hardy, Altrincham	237 19 0
Turner & Sons, Wrexham	234 6 6
Edmund Bird, Chorlton (accepted)	197 13 9

For alterations and repairs to the premises, 141, High street, Hounslow, for Mr. A. Platt. Mr. T. W. Barry, architect:—

G. Daniels	£970 0 0
J. Windred	965 0 0
W. Hogbin	950 0 0
J. Osborne	850 0 0
W. Wisdom (accepted)	775 0 0

For building two houses on Stepney-green, for Mrs. Gretton. Mr. Mitchell, architect:—

Higgs	£1,930 0 0
Rice	1,761 0 0
Young & Fraser	1,706 0 0
Lemon	1,680 0 0
Judd	1,649 0 0

For new billiard-room, conservatory, and greenhouses at Hamilton House, Southampton, for Mr. Leon Emanuel. Mr. Arthur Martin, architect:—

Watts (accepted)	£1,565 10 0
Hot-Water Fittings.	
Milsom (accepted)	302 14 0

For rebuilding premises, 17, High-street, Dorking, for Mr. Henry Cole. Messrs. Peak, Lunn, & Peak, architects. Quantities supplied:—

S. J. Pledge, Holmwood	£1,017 11 0
H. Batchelar, Betchworth	956 13 0
Hamblin Bros., Dorking	905 0 0
C. C. Heselgrave, Dorking (too late)	893 0 0
Goddard & Sons, Farnham	890 0 0
Lynn & Dudley, Dorking	875 0 0
W. Edser, Dorking	840 0 0
Jas. Clear, jun., Dorking (accepted)	811 16 0

For sundry painters' work to property, Railway Esplanade, Guildford. Messrs. Peak, Lunn, & Peak, surveyors:—

B. Jelley & Son, Guildford	£132 15 0
R. Nye, Guildford	125 0 0
H. Edmead & Son, Guildford	105 0 0
A. Higlett, Guildford	98 10 0
J. K. Miller, Guildford (accepted)	97 10 0

For reconstructing portion of 99, High-street, Guildford, for Mr. G. Oliver. Messrs. Peak, Lunn, & Peak, architects:—

T. Swayne, Guildford	£380 0 0
W. Billimore, Guildford	315 0 0
T. E. Downes, Guildford (accepted)	256 10 0

For new staircase, water-closet, &c., 12, St. Catherine's-terrace, Guildford. Messrs. Peak, Lunn, & Peak, architects:—

A. W. Moon, Guildford	£156 0 0
R. Nye, Guildford	150 0 0
Smith & Sons, Guildford (accepted)	140 0 0

For house at Wokingham, for Mr. Bartle G. Goldsmid. Mr. R. Norman Shaw, R.A., architect. Messrs. Franklin & Andrews, surveyors:—

Perry & Co.	£7,788 0 0
Kimberley	7,728 0 0
Botterill	7,657 0 0
Martin, Wells, & Co.	7,653 0 0
Brass	7,583 0 0
Lawrence	7,345 0 0
R. Conder	7,160 0 0

For new Board Schools, Shillington-street, Lambeth division, for the London School Board. Mr. E. R. Robson, architect. Quantities by Mr. T. Thornton Green:—

J. Oliver	£13,474 0 0
J. Maraland	13,304 0 0
Wm. Brass	13,000 0 0
W. J. Larke & Son	12,994 0 0
Perry & Co.	12,994 0 0
Higgs & Hill	12,784 0 0
Kirk & Randall	12,483 0 0
W. Scrivener & Co.	12,463 0 0
Wall Bros.	12,290 0 0
B. E. Nightingale	12,134 0 0
W. Oldrey	12,101 0 0

For rebuilding Sun and Thirteen Cantons public-house Great Pultney-street, W. Mr. Cotton, architect. Quantities supplied:—

Patrick & Son	£2,795 0 0
McLachlan & Sons	2,779 0 0
Williams & Sons	2,645 0 0
Foxley	2,590 0 0
Patman & Co.	2,573 0 0
Stimpson & Co.	2,433 0 0
Langmead & Way	2,173 0 0

For enlargement of schools, Neckinger-road, Bermondsey, for School Board for London. Mr. E. R. Robson architect:—

W. Scrivener & Co.	£5,494 0 0
Steel Bros.	5,472 6 6
Kirk & Randall	5,337 0 0
S. J. Jerrard	5,175 0 0
W. Shurmur	4,977 0 0
W. Shepherd	4,939 11 0

For red granite (delivered only) for the piers of the Dome addition to the Stock Exchange. Mr. J. J. Cole architect:—

In Ross of Mull.	
Fenning	£12,992 0 0
In Corrennie.	
Fyfe	13,240 0 0
Nicholson	13,240 0 0
In Peterhead.	
Wright & Sons	13,228 0 0
Bower & Florence	13,220 0 0
Macdonald, Field, & Co.	12,515 0 0
Fraser & Son (accepted)	10,500 0 0

For the erection of farm buildings at Cheam, for Capt. John Hilbert Tate. Mr. Marshall N. Inman, architect:—

	Park Farm.	Cheam Hall Farm.
Taylor	—	£465 0 0
Humphries	£1,180 0 0	429 0 0
Bassett	1,148 0 0	335 15 0
Lawrence	1,123 18 0	353 2 0
Neal	1,120 0 0	350 0 0

For road and drainage works on the United Land Company's Harrow-road Estate, Kensal-green:—

W. Nicholls	£7,074 0 0
J. Simmons	6,735 7 8
W. J. Botterill	6,727 0 0
Nowell & Robson	6,395 0 0
J. Jackson	6,333 0 0
Ford & Everett	6,000 0 0
Rowland Bros.	5,995 0 0
J. W. Simpson	5,926 0 0
C. Killingback	5,845 0 0
A. F. James	5,762 0 0
E. & W. Iles	5,647 0 0
Neave & Son	5,640 0 0
J. Stockwell	5,565 0 0
J. Cardus	5,495 0 0
Currall & Lewis	5,400 0 0
J. Pizzey	5,300 0 0
M. W. Rowles	5,192 0 0
Wilkes & Co.	5,186 0 0
C. Taylor	5,000 0 0
G. Felton (accepted)	4,998 0 0

For formation of road, footpaths, and sewer, at Neasden, Middlesex, for the Metropolitan Railway Company. Mr. Walter Graves, surveyor. Quantities by Mr. H. E. Pollard:—

W. Crockett	£2,858 0 0
F. W. Keeble	2,500 0 0
Nowell & Robson	2,400 0 0
W. J. Botterill	2,386 0 0
G. Felton	2,199 0 0
A. Oliver	2,088 0 0
Mowlem & Co.	1,980 0 0
Wall Bros.	1,949 0 0
C. Killingback (accepted)	1,930 0 0

For the erection of four shops at Kilburn, for Mr. R. Rose. Mr. Walter Graves, architect. Quantities by Mr. H. E. Pollard:—

Ward & Lamble (accepted)	£3,300 0 0

For alterations to Manor House, Gunnersbury-lane, for Mr. J. Howard Walker. Mr. Walter Graves, architect:—

Eydmann	£149 0 0
Penny & Durrant	130 0 0
Nye & Son	121 0 0

For alterations to No. 16, Vicarage-gardens, Kensington, for Mr. J. Hanson Walker. Mr. Walter Graves, architect:—

Joseph Mears	£310 0 0

For cricket pavilion in Lytham, Lancashire. Messrs. Myres, Veevers, & Myres, architects. Quantities supplied by architects:—

Henry Ward	£380 6 4
John Walmsley	356 8 5
T. Myrescough	340 0 0
E. Wilson	294 16 8

For alterations and additions to Warwick House, and No. 12A, High-street, Clapham, for Mr. W. Edwards. Mr. J. William Stevens, architect:—

Pack	£381 0 0
Oxford (accepted)	303 0 0

For reinstating, after fire, 139, Cannon-street-road, St. George's-in-the-East. Mr. Geo. Legg, architect:—
W. Shurmur (accepted).

For alterations, B. de Bella's restaurant, 118, Holborn:—
F. P. Treweeke & Co. (accepted) £600 0 0

For alterations, Continental Café Restaurant, 7, Wilton-road, Victoria Station, for Messrs. Monico, Ramponi, & Co. Mr. F. A. Doucey, architect:—
F. P. Treweeke & Co. (accepted) £700 0 0

For new road (called Crescent-road) and sewers at Finchley, for Messrs. Dence & Mason. Messrs. E. E. Croucher & Co., surveyors:—

McKenzie, Williams, & Co.	£760 0 0
T. G. Dunmore	607 9 0
J. Bell (accepted)	439 0 0

For alterations and additions to Nos. 33 and 35, Porchester-road, Paddington, for Mr. R. O. Davies. Mr. M. H. Pocock, architect :—

Dixon, Roberts, & Lawrence	£1,378	0	0
Drew & Cadman	1,260	0	0
Wm. Oldrey	1,157	0	0
Holloway	1,135	0	0
Ashfold	1,050	0	0
Goad	870	0	0
Sharpe	828	0	0
Strong	800	0	0

For making about 1,800 feet of road at Homerton, as advertised in the *Builder* of the 25th of February last :—

J. W. Simpson	£1,636	0	0
W. Porter	1,195	0	0
T. Wainwright	1,175	0	0
P. G. Pound	1,099	0	0
J. Rendell	962	0	0
G. G. Rutty	837	0	0
Wilkes & Co.	658	0	0
G. Impey	635	0	0
H. Potter (accepted)	630	0	0

For the erection of a coffee tavern at Luton, Bedfordshire, for the Bedfordshire Coffee Tavern Company. Mr. Charles Bell, architect. Quantities by Mr. H. Lovegrove :—

Allen & Sons	£2,589	0	0
Smith	2,327	0	0
Batson	2,135	0	0
Bunn	2,095	0	0
Green	2,045	0	0
Foster	2,011	0	0
Robinson	1,984	0	0
Smart, Luton	1,877	0	0

For new class-rooms, Trinity Presbyterian Church, Hampstead. Mr. Charles Bell, architect. Quantities by Mr. H. Lovegrove :—

Bamford	£1,035	0	0
King	998	0	0
Woodward	940	0	0
Holliday	935	0	0
Allen & Sons	910	0	0

For alterations and additions to residence and conservatory at Holmwood, Sydenham-hill, for Mr. E. Robinson. Mr. T. Porter, architect. Quantities taken out by the builders :—

Higgs & Hill	£929	0	0
G. S. Pritchard (accepted)	929	0	0

Accepted for the plant and machinery of a new 50-qr. brewery, for Mr. Peter Walker, Burton-on-Trent. Messrs. Seamell & Colyer, engineers :—

Boilers.

Thornewill & Warham, Burton	£1,195	0	0

Millwrights' Work.

G. Waller & Co., London	3,677	0	0

Coppers.

	Coppers.	Coils.
Bindley & Briggs, Burton	£783	£360

Backmakers' Work.

Wilson & Co., Frome	£880	0	0

Slate Mason.

Ashton & Green, London	£244	0	0

Pipe Connexions.

Bindley & Briggs, Burton	£2,485	0	0

Refrigerators.

Morton & Co., Burton	£300	0	0

Note.—The results of the building and ironwork contracts have been previously announced :—

Lowe & Sons, Burton	£21,409	0	0
Eastwood & Swingler, Derby	4,376	0	0

For rebuilding 22, Market-street, Mayfair. Mr. C. Innes, architect. Quantities by Messrs. Winsor & Hancock :—

Wall Bros.	£1,897	0	0
Clarke & Bracey	1,784	0	0
Patman & Fotheringham	1,773	0	0
Bangs & Co.	1,725	0	0
Henderson	1,690	0	0
Fish	1,660	0	0
Chapley	1,618	0	0
Lidstone	1,559	0	0
J. S. King	1,550	0	0
Titmas	1,549	0	0
Curtis	1,477	0	0
Scrivener	1,470	0	0
Langmead & Way	1,468	0	0
Searle	1,448	0	0

For the erection of dwelling-house and shop, Twickenham, for Mr. H. F. Peake. Messrs. A. & G. M. Silley, architects. Quantities not supplied :—

Brown	£1,525	0	0
T. J. Measom	1,224	0	0
J. F. Collinson	1,096	0	0
J. L. Cole, Twickenham (accepted)	1,090	0	0
J. W. Cowland	1,076	0	0

For alterations to Nos. 10 and 11, Percy-street, Tottenham-court-road, and for rebuilding warehouses in rear thereof and facing Percy-mews and Stephen-mews, for Messrs. George Rowney & Co. Messrs. Ebbetts & Cobb, architects. Quantities supplied by Messrs. Hodgson & Mundy :—

		Credit.
Howard & Dorrell	£8,875	£50
Wm. Bange	8,855	—
T. Nixon	8,750	—
F. Sanders	8,690	—
Robt. Perkins	8,677	180
Steel Bros.	8,100	125
B. E. Nightingale	8,010	50
J. M. Macey & Sons	7,998	180
T. J. Measom	7,995	100
Lathey Bros.	7,900	—
H. Baylis	7,595	256

Separate trade tenders :—

Hydraulic Lift.

Spencer & Gillett	£300	0	0

Columns and Girders.

Archbd. D. Dawnay	£1,108	0	0

Concrete Staircase.

Eureka Company	£144	0	0
A. Walker	113	0	0

Fibrous Plaster Ceilings.

Allen & Gengo	£153	16	0

Galvanised Wrought-Iron Tanks.

Davies & Co.	£120	12	6
A. D. Dawnay	88	17	6

TO CORRESPONDENTS.

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